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THE MOON: Outpost of the Gods

Jean Sendy

AUTHOR OF

THOSE GODS WHO MADE HEAVEN AND EARTH

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By the Same Author

THE COMING OF THE GODS
THOSE GODS WHO MADE HEAVEN AND EARTH

THE MOON: Outpost of the Gods

Jean Sendy

TRANSLATED BY LOWELL BAIR

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She articulated logical reasoning
on the basis of rational, verifiable
data; that is why she was called
Hypothesis.

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Hors-D'Oeuvre

The more I am led to think that God does not exist, the better I understand those who need to believe.

—Jean Rostand

"Rational" is a word that usage has made irrational. For some, it evokes the reassuring and reasonable quality of beaten paths; for others, only ideas in conformity with reason (but not necessarily "reasonable") can claim to be rational.

I do not know if it is reasonable to maintain that the Bible and "idolatrous" myths tell the same story of astronauts who came to Earth "from the sky" in the Paleolithic Age (about 21,000 B.C.) and whose descendants went off again "into the sky" in about 8000 B.C. I only know that the hypothesis of those "Celestials" who became "gods" or "angels" in human memory is the only one that offers a *rational* explanation of the enigmas of protohistory.

Should we be disturbed by this, or reassured? If the story told in Genesis is in conformity with historical truth, and if the bearded Sunday-school God who governs a universe created in six times twenty-four hours was not introduced until later, by superstitious people

with an irresistible need to believe in an improved Zeus, then a rationalist like me can only heave a sign of relief: it is reassuring to think that the Law of Moses, on which our civilization is founded, is not a mass of superstitious drivel, but a historical account (distorted in varying degrees) of the colonization of our remote ancestors by astronauts "in our image" who came from that "sky" which we have also begun to explore.

I am obviously dodging the main point and only pushing the problem back a notch, since I do know where "my" Celestials got *their* civilization or even why they came and left.

I must take refuge under the protective wing of Pasteur, who, in demonstrating the impossibility of "spontaneous generation," only pushed back the problem of the "initial germ." In our time, what appears to be a rationally indefensible superstition is the "spontaneous generation" of civilizations that suddenly arose, fully developed, at the dawn of history.

It may be, of course, that I am mistaken. I am publishing my hypothesis, based on a logical line of reasoning, in the hope that you will point out any errors I may have made. I am not trying to convince anyone, since facts will soon divide those who accept and those who reject my hypothesis of Celestials "in our image."

If "my" Celestials were really "in our image," they must have made a "spaceport" on the moon. And if it is true that the Biblical text on which I base my hypothesis gives us to understand that a "message" is waiting for us somewhere on the moon, discovery of a pottery fragment (or a stainless steel machine part that is neither Russian nor American) on the surface of the moon will be enough, first, to demonstrate that a civilization older than ours used the moon as a base: and second, to validate the whole Biblical text that

enabled me to foresee, by theory, the discovery of a pottery fragment or a machine part.

In other words, if the Biblical text is not a hodgepodge of legends, but the historical account that I am proposing, the rational key to its "enigmas" is waiting for us on the moon.

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CHAPTER I

The Concrete Reality of "Angels" is a Rational Hypothesis

The theologians of Byzantium maintained that the angels had sexes. They were not practical jokers or theology-fiction writers; they were scholars with a sound knowledge of Hebrew who disputed translations of the Bible in which the Hebrew "Elohim" is rendered as "God."

Does "Elohim" mean "God?" That is the whole problem.

In Hebrew, "Elohim" is the plural form of "Eloah," and "Eloah," in the singular, appears forty times in the Book of Job. "Elohim" is therefore not "God," but "gods." In the West, most Bibles see "Elohim" as a "plural of majesty" and translate it as "God" throughout the text. Bibles of the Russian Orthodox Church (the heir of Byzantium), however, translate it sometimes as "God" (notably in Genesis) and sometimes as "the angels" (notably in Psalm 8).

"Immaterial God" or "physical angels with sexes?" A translation intended to be rational must choose between those two meanings of a single word in the original text.

The point of departure for the hypothesis that I am proposing is a reading of the Bible in which "Elohim" is translated not as "God," but as "the angels" throughout the text.

Read in this way, Genesis becomes a perfectly consistent story of a colonization of Earth by astronauts who "came from the sky" and became "angels" in human memory.

You can, of course, simply take my word for what I am saying, but I would prefer you to read the first eleven chapters of Genesis and see for yourself, first, that I have not skipped over any passages that might contradict the coherence I am claiming; and second, that in no case is it necessary to warp the text in order to bring out that rational coherence.

There is a good example in Genesis 6: 2-4: "The sons of the gods saw that the daughters of men were beautiful; so they took for themselves such women as they chose. [...] In those days, when the sons of the gods had intercourse with the daughters of men and got children by them, the Nephilim were on Earth. They were the heroes of old, men of renown."

In the context, mankind appears as an anonymous mass from which Adam's descendants take women who will give them children and the workers necessary for building cities. Only the "men of renown" have their family tree described in the fifth chapter of Genesis, devoted to the "generations of Adam." Adam was "created by the Elohim," which brings us back to the "creation" of "men of renown" by sexual relations between sons of the Elohim and anonymous daughters of men.

Another good example is in Psalm 8, which says that "mortal man" is "little less than a god"; Bibles in the

Byzantine tradition translate this as "little lower than the angels."

If the point is so obvious, why should I be the first to have read the Bible in this way? Without claiming to explain everything, I can give a few solid reasons:

1. To devout monotheists, it is an abomination to see sexed angels where religious doctrine teaches them to see the Immaterial God.

2. To devout atheistic positivists, it is absurd to look for any kind of coherence in the Bible.

3. To Cartesian skeptics, the rational possibility of astronauts having lived on Earth has become acceptable only in recent years.

4. Someone has to be the first to formulate any new hypothesis.

But am I really the first? Yes and no.

No, since the question was already discussed in Byzantium, which fell into the hands of the Turks in 1453, before its theologians had come to an agreement on the concrete reality of the Elohim-angels. But in 1453, stating that the Earth had been colonized by Celestials in our image, with sexual attributes like ours, amounted to implicitly laying down some postulates that were premature, to say the least:

1. The postulate that space travel is within the reach of beings in the image of man, in a rational universe where there is no room for "miracles."

2. The postulate that the stars are not simply points of light in the sky and that some of them are the "suns" of inhabited planets.

3. The postulate that idolaters are right to believe in the reality of their gods, and wrong only in "worshiping stone idols"; that is, in praying to statues representing astronauts who died thousands of years ago.

These postulates are quite acceptable to Cabalists (as

we will see later), but they were thoroughly unacceptable to the medieval Church, which, in its struggle against still-powerful paganism, needed the *certainty* that the Earth was flat, that it was located at the center of the universe, and that it benefited from the Revelation brought by the Only Son of the One God.

Adversaries of the "sexed angels" thesis came from the ranks of reasonable theologians who saw it as a kind of absurd theology fiction. There were such adversaries in Byzantium itself, and also in Rome.

But in Rome the thesis had its partisans. The popes who had St. Peter's Cathedral in Rome (built between 1452 and 1614) decorated with portraits of Greek gods, incongruous in the spiritual center of a monotheistic religion, seem to have made a clear-cut choice: there is only a difference of vocabulary between the "angels of Byzantium" and the "gods of Olympus."

I am thus not the first to conceive of concrete Elohim, "angels" from the sky, who can be identified with the Celestials of pagan myths.

But I am the first to try to demonstrate that a thesis which was a metaphysic (that is, a series of unverifiable assertions) in the time of Byzantium has now become a rational hypothesis subject to experimental verification.

Since I am both the first to formulate my hypothesis and a Westerner schooled in the system of methodical doubt, a dilemma arises: either I have gone mad and a "logical delirium" well known to psychiatrists makes me see rational connections where none exist (a classic form of paranoia), or there are solid reasons for the fact that no one before me was led to formulate my hypothesis, which in that case has a chance of being rationally coherent.

Having stated my dilemma, I am no better off than before: a good paranoid can always explain his con-

temporaries' incredulity with reasons as solid as the ones I am attributing to those who did not formulate my hypothesis before me, and even to those who doubt it now that I have formulated it.

So I am turning to you: in this book you will find the data underlying my hypothesis and the reasoning I have built on those data. I have taken them from the Bible and from what science now believes.

Since this book is not reserved exclusively for those who know Byzantine theology as well as contemporary physics, I will present both these subjects in language understandable to people whose ambition is not to "know everything about everything," like the winner of a television quiz program, but to reduce the number of their false ideas to a minimum.

CHAPTER 2

The Base on the Moon

1. The moon is not and never has been inhabitable for advanced organisms.

2. For launching large spacecraft, the moon (escape velocity: 1.5 miles per second) has great advantages over the Earth (escape velocity: 7.02 miles per second), even though assembling the parts of the craft requires workshops in which *everything* (beginning with breathable air) must be brought from the Earth.

3. Insofar as the Celestials of my hypothesis are now conceivable, the moon must have been a "spaceport" for them, as it will be for us.

The slightest evidence showing that astronauts preceded us on the moon would confirm the principle of my hypothesis. Total confirmation of it requires that the following things be found under the surface of the moon: on the "visible face," underground chambers used for maintaining contact with Earth; on the "hidden face," astronomical observatories and a spaceport for trips to and from other planets.

I am neither a visionary nor a charlatan. I do not say

the Earthly astronauts will eventually find ready-made "survival chambers" on the moon. I do say, however, that if exploration of the moon fails to turn up any trace of astronauts who preceded us there, the overall coherence that I am proposing will be disproved.

That last statement is necessary because at no point in this essay will I be dealing with metaphysics (a domain in which anyone can say anything); I am concerned only with a rational hypothesis subject to unambiguous experimental verification in the near future.

With that in mind, we can examine the reasons that give rational plausibility to the hypothesis of "my" Celestials, a hypothesis based on data that anyone can verify.

There are things that go without saying, but go better if they are said. Life appeared on Earth about a billion years ago, with an "initial cell." No one knows how that cell appeared, but it is generally accepted that by a process of natural evolution it gave rise to rudimentary living organisms, then less rudimentary ones, then man.

The first "man" appeared about 600,000 years ago. There is no shortage of serious works of scientific popularization which describe how evolution probably took place from the Lower Paleolithic (600,000 to 100,000 years ago) to the Upper Paleolithic (35,000 years ago), from which we find the first traces of our direct ancestor *Homo sapiens* creating a "civilization" that was quite elementary but already appreciable.

In about 22,000 B.C. the conditions of Earthly life were profoundly disturbed by the Würm III glaciation. Its exact effects are not known, but we are beginning to have some solid information on it. In the second part of this book we will see what a glaciation is and how certain data, diverse enough not to constitute a "unique testimony," enable us to make crosschecks leading to

the conclusion that the Celestials of my hypothesis arrived between 24,000 and 23,000 years ago.

But is there not a childish anthropomorphism in imagining Celestials physically in our image? No. Biologists are coming to regard our human form as the one most likely to become the seat of an intelligence capable of conceiving problems of the cosmos.

There is thus no *rational* argument against the working hypothesis of beings in our image, with knowledge surpassing ours, coming "from the sky" and finding on Earth people who were already human in the full meaning of the term, but whose "civilization," just after a terrible glaciation, was less highly developed than that of contemporary Papuans.

The chronology I am proposing (leaving aside the reality of the Celestials for the moment) can be summed up as follows:

1. Life appeared on Earth and evolved in the way described by reliable college textbooks.

2. In about 21,000 B.C. astronauts came from another planetary system in our galaxy and began colonizing our Neolithic ancestors.

3. A wrong move disrupted the process of civilization and the descendants of the Celestials left our planet in about 8000 B.C.

4. The Biblical story, and the Myth of *all* the civilizations that arose fully developed in protohistoric times, relate this and nothing else, with the distortions that are inevitable in a tradition that remained oral for a long time.

5. The "innovation explosion" that the best ethnologists date at about 8000 B.C. seems better explained by the presence of Celestials than by any of the other hypotheses proposed so far.

The above chronology is based on correlations between the Biblical text and our knowledge of the period

in question. These correlations can have only three explanations: (a) Pure Chance; (b) a direct revelation given to Moses by the Sunday-school God; (c) the Celestials of my hypothesis.

The correlations I present in this book seem too numerous to be completely accounted for by Pure Chance. The idea of Moses writing on stone tablets with a chisel, under the dictation of the Immaterial God, seems incongruous to me. Therefore the hypothesis of a teaching left by "my" Celestials, and found by Moses, appears to me the only rational explanation conceivable so far, and I have been proposing it since 1963.

At the end of Part One of this book I will thank those who have led me to see errors in my first two books *Les cahiers de cours de Moise* and (*Les dieux nous sont nés*) and I will specify what those errors are. But so far no *fundamental* error has been detected in the hypothesis I am proposing.

Did "my" Celestials draw their knowledge from some source inconceivable to us, or did they simply come from a planetary system whose civilization began 25,000 years earlier than ours, so that 24,000 years ago it had reached the stage that ours will presumably reach a thousand years from now?

Explanation in terms of a simple chronological head start is the most "reasonable," but not necessarily the best. In any case, it is more rational to wait for confirmation of the Celestials' concrete reality before trying to determine where they came from.

Shortly before his death, Victor Bérard said he was certain that he was going to find the "tomb of Zeus." It would have been an exciting discovery but it would have resolved nothing since, for a rational mind, any manufactured object found on Earth *must* be attributed to human activity. If a mere fragment of pottery is

found on the moon, however, it will be enough to demonstrate that thinking beings preceded us there—and therefore lived on Earth, since the moon has never been inhabitable for advanced organisms.

In this book I will systematically present the data that have led me to formulate my hypothesis. Did I put the cart before the horse by first publishing *Les cahiers de cours de Moïse* and *Les dieux nous sont nés,* in which I assumed that those data were known? A certain number of reasons prompted me to proceed in that way. Be that as it may, this book is also a key to "Moses" and "the gods."

CHAPTER 3

Were Astronauts Physically Able to Come From Another Planetary System?

François Le Lionnais, president of the French Science Writers' Association, wrote to me in a letter dated September 25, 1967: "To the best of my knowledge, no scientist has concluded that interstellar travel is impossible."

Yet in 1966 and 1967, soon after I published *Les dieux nous sont nés,* a certain number of people, non-scientists and therefore doubly cautious with regard to a hypothesis like mine, refused to consider it because in September, 1965, an excellent weekly had published statements by a physicist who maintained that it was impossible for man (and consequently for astronauts in our image) to travel between planetary systems, even within our galaxy.

Did the terms of that unfortunate article go beyond the physicist's ideas? That is unimportant; the authority of François Le Lionnais is enough to make my initial postulate of "Celestials" acceptable. I still have to show what makes that "non-impossibility" plausible and even probable.

All the "First Civilizations" (China, Mesopotamia, Near East) claimed to have a "revealed teaching," an

alleged heritage from gods in the image of man who came from the sky and then left a few thousand years before the dawn of historic times—that is, about 8000 B.C.

Is all that nothing but poetic myths and empty legends?

The nineteenth century was convinced that it was. And as late as the mid-1950s it was still perfectly legitimate to cling to the convictions of the nineteenth century, since there was as yet no proof that man could escape from the Earth's gravity, survive a crossing of radiation belts about which nothing was known except that they existed, and land on the moon.

It is now accepted that there is no theoretical impossibility in the idea of man's going to Mars and Venus, then setting out to reach nearby planetary systems. And so the whole context of the Myth of the First Civilizations has been radically altered.

We can no longer rule out the possibility that the gods of the Myth really existed.

The real existence of those gods would be the most rational explanation of the scientific knowledge of Antiquity.

The priest-kings' claim of being direct descendants of the gods—that is, bastards born of intercourse between the sons of the Elohim and the daughters of men—can no longer be rejected as obviously absurd; and it is possible that they had a "celestial heritage" of "esoteric teachings."

The alleged celestial heritage is not limited to a story of the past: it also involves promises for the future, notably the promise that when "the time has come," man will equal the gods.

This means that the disruption of our ideas on the reality of the ancient gods is accompanied by a disrup-

tion of the ideas we can form about the near future—and our potential ability to determine what that future will be like.

It would not be the first time, of course, that mankind has had to reject convictions that seemed solidly grounded. In the seventeenth century, people had to give up the idea that the Earth was at the center of the universe and that the stars were points of light in the firmament. They had to revise their interpretation of the Biblical text relating the creation of the universe. They got used to it slowly, since there was no reason to hurry.

We will have less time to change our thinking if we learn that Celestials landed on the moon before we did. Within an hour of the discovery, radio stations all over the world will announce that the Bible (and therefore the moral and ethical foundation of the West) and nineteenth-century positivism (and therefore the scientific foundation of atheism) must be radically reconsidered.

Even for someone who intuitively feels that there is little chance of confirmation for the hypothesis I am trying to make rationally plausible, this deserves serious reflection.

Presently accepted ideas concerning geology, the appearance of life and the evolution of species would probably be amply confirmed: in about 21,000 B.C. the Würm III glaciation had caused the Earth to be surrounded by a layer of clouds that the light of the sun could not penetrate—which tallies with the description given at the beginning of the Bible.

Since the theologians of Byzantium (and sometimes those of Rome) did not categorically reject the hypothesis of sexed angels, we may assume that the Church would find nothing insurmountable in the task of reformulating the catechism. Would that reformula-

tion be convincing, or would the Church give the impression of "clutching at straws" if it had not first taken an option on the hypothesis? It is not for me to say.

As we will see later, several Russians have already taken an option on the hypothesis of astronauts who came to Earth thousands of years ago. Will Western positivists follow suit, or take an option formulated in different terms? Here again, I can only raise the question.

All I can say is that each "day" in the Biblical creation story seems to correspond to a twelfth of the cycle of 25,920 years that we will examine in detail in Part Two of this book. That would give each "day" a duration of about 2,160 years.

Applying the word "day" to an unspecified period of time is a frequent practice, not only in the sacred books of Antiquity but also in the common language of the twentieth century: we often say "tomorrow" for future centuries and "yesterday" for past millennia.

In situating the Würm III glaciation at the beginning of the cycle, we will see that the "seventh day" of Genesis corresponds both to the mission of "creating the world of men" entrusted to Noah in the Bible (and to other "giants" in other myths) and to the "innovation explosion" of 8000 B.C., whose concrete reality is affirmed by Professor Leroi-Gourhan.

One thing must be pointed out here: all "pagan" myths have come down to us laden with embellishments added by the "poets" whom Plato cursed; only one story has come to us unembellished: the one transmitted by the "chosen people" of Moses. The Law of Moses forbids changing a single letter of it.

As a result, it is impossible to start with any of the "pagan"myths and go back to the gods who appear in them, by a process of reasoning comparable to the one

that will enable us to start from the Biblical text and go back to the concrete Elohim of my hypothesis.

But in the study of facts that make plausible and even probable the concrete reality of the Celestials who appear in *all* myths, "pagan" myths have a useful though secondary function: they serve as naive illustrations that facilitate the task of the imagination.

CHAPTER 4

The Tower of Babel and the Great Pyramid

A whole literature proclaims that the architect-priests of the Great Pyramid knew as many things as we do, or even more. What did they "know?"

For us, the concrete reality of the Celestials is merely a hypothesis that still remains to be demonstrated; for them, it was the very foundation of their faith—and of their science, which they regarded as a heritage from gods who came from the sky. "Knowing" the reality of the Celestials, if Pharaoh's priests had also had the "modern" scientific knowledge attributed to them, they would have gone "into the sky" and landed on the moon long before us. Since they did nothing of the sort, they lacked something.

That Cartesian reasoning is not mine: it is in the Biblical text, the only "myth" from which we can *rationally* go back to the Celestials it speaks of. Applied to the Great Pyramid, the Biblical Cartesian reasoning that prescribes "judging a tree by its fruits" enables us to say several things about the architect-priests:

1. They were certain of the reality of the Celestials.
2. They had knowledge whose scientific validity has

been confirmed in the twentieth century, though modern scientists are still at a loss to explain how it could have been acquired at the end of the Neolithic.

3. They claimed to have inherited that knowledge from Celestials who went off "into the sky."

4. In the "initiatic architecture" of the Great Pyramid they recorded what they had preserved of the alleged scientific heritage.

5. That scientific heritage was not adequate (or was *no longer* adequate by the time the Great Pyramid was built in about 2700 B.C.) to enable them to go "into the sky" by making a spacecraft modeled on those which, according to the Myth, were commonly used by the Celestials.

The problem is to determine whether those Celestials, their spacecraft and their scientific heritage are a fairy tale or a reality. Here again, we must turn to the Bible; it tells of man's last attempt in ancient times to reach "the sky."

Since the nineteenth century doubted the possibility of human flight, it obviously could see nothing but legend in a story implying interstellar travel. But we now have only to re-examine the mistaken certainties of the nineteenth century in order to see correlations too flagrant to be attributed to Pure Chance.

Chapter 11 of Genesis (in which the story of the tower of Babel is related) abounds in correlations between an account thousands of years old and concrete realities of today.

At the end of Chapter 10, the Celestials have just left after destroying their Earthly installations in the "Deluge." (This takes place in protohistorical times, in about 6500 B.C., four thousand years before the building of the Great Pyramid.) The Celestials had left disgusted with the wickedness of man, whose "thoughts and inclinations were always evil" (Genesis

6:5), and they had decided to destroy everything they had created on Earth. Only Noah had "won the Lord's favour." Noah was a bastard of the Elohim, the Celestials who had left him a rather large number of things and teachings, a list of which begins in Chapter 8.

What things and teachings? There is a great temptation to *interpret* the text to make it seem to say more than it actually does. Let us shun temptation and stick to the text without "nudging" it: the things and teachings preserved in Noah's Ark were necessary and sufficient for his descendants to be able to try to build the tower of Babel.

Chapter 11 begins by telling us that "all the world spoke a single language and used the same words" when men decided to build "a tower with its top in the heavens." What "men?"

When we read a Bible in which "Elohim" is translated as "God," we flounder in absurdity: Noah has just come out of his Ark and the Earth has been depopulated. But if the Elohim are "my" Celestials, the Deluge has destroyed only their bases, and the Earth is still populated by Paleolithic communities when Noah emerges from his "Ark" with his three sons; because of the things and teachings preserved in the "Ark," the difference between them and the rest of mankind is much greater than between our Nobel Prize physicists and contemporary Papuans. This hypothesis is all the more likely because the Earth's population in the Paleolithic was already in the hundreds of thousands.

Let us go on reading Genesis attentively and without preconceived ideas. At the end of Chapter 10 we are told that "from them [Noah's grandchildren] came the separate nations on earth after the flood." Did they go off to form scattered human communities into nations?

Bolstered by their knowledge, did they impose themselves as kings and priests on populations for whom possession of a flashlight, for example, was a miracle that unquestionably qualified one to be a priest-king by divine right?

On the hypothesis of coherence that I am proposing, we can read this in the Biblical text without any "nudging," and it is compatible with the most solidly established data of ethnology.

Having organized Paleolithic populations into "nations," the descendants of Noah's three sons reigned as absolute monarchs. They were the kings of primitive nations for whom the *Neo*lithic was something *new*, taught by the sons of the Celestials; other communities remained animistic and were the last to emerge from the Paleolithic.

There is still the statement that "all the world spoke a single language and used the same words," which seems to contradict the laws of evolution confirmed by ethnology. It is certain that as the Neolithic was approaching, "I'm hungry" and other elements of ordinary Paleolithic conversation were expressed by radically different sounds in China, Mesopotamia, Egypt and each of the "nations." But it is not ordinary conversation that is being referred to in Chapter 11. What is involved is a "metaphysical venture": in building their tower, the priest-kings who claimed to be descendants of the Celestials intended to rejoin their ancestors "in the sky."

Noah's descendants obviously spoke the same language when they set out to form nations. Did they later go on speaking among themselves the language in which the things and teachings inherited from the Celestials were naturally expressed, whereas they were "inexpressible miracles" in the languages of the Paleolithic natives? That would be logical.

Did they select the most intelligent natives and form them into a clan of priests who used the same "sacred" language all over the Earth for speaking among themselves about the things and teachings inherited from the Celestials? On the hypothesis that the Biblical text reflects a truth, that is quite logical and likely; on the hypothesis that the Biblical text is a mass of nonsense, it is all but impossible to give a rational explanation of such a correlation between modern data and a story thousands of years old.

Were Noah's descendants able to bring *all* Paleolithic communities under their physical domination? It is unlikely in theory and on the basis of what seems to have been established in practice. The "single language" must have been "universal" in the sense that the Latin of the Catholic Church is "catholic" (from the Greek *katholikos,* "universal"). But the Bible remains singularly coherent and plausible when it shows us a meeting in Babel of an "ecumenical council" of priests who spoke the "catholic" language of the time and set about building a "tower with its top in the heavens."

The "confusion of languages" that ends the story of the tower of Babel may have occurred when the kings descended from the Celestials had failed in their premature attempt to reach "the sky" and the priests of communities that had remained animistic triumphantly said, "We told you so: the Yahweh of the Elohim works no more miracles than our gods!"

This hypothesis of a confusion in the *language of the priests* is not stated in the text; I am presenting it, without asserting its accuracy, because it is the most plausible hypothesis and is nowhere contradicted in the text. In Babel the "priests of Yahweh" lost face. After that failure the reality of a sojourn on Earth by the Celestials, who had been gone for centuries, became a

mere article of faith and ceased to be a certainty. The first "catholicism" died at Babel and, if I have read it correctly, the Bible is again in agreement with the data of ethnology.

But let us leave these speculations and return to the text. When we try to reconstitute a distant past, we should not depart from the method of Cartesian doubt, which means that we should define words that might otherwise cause confusion, specify the source of each piece of information and state the context that enables us to discern its real meaning.

For the nineteenth century, the transition from the Paleolithic (from the Greek *palaios,* "ancient," and *lithos,* "stone") to the Neolithic was essentially characterized by the transition from the "ancient" method of making stone tools to a new method. It is often forgotten that, for modern ethnology, the entrance into the Neolithic was manifested above all by the appearance of organized farming and stock-breeding.

Ethnologists usually attribute that progress to the normal, natural development of intelligence and technology. The weak point of this view is that in about 8000 B.C. there was what Professor Leroi-Gourhan calls an "innovation explosion," a leap forward which ethnologists have ascertained without being able to explain it. This commonly accepted view refuses to see anything but groundless legends in the Myth which explains the "innovation explosion" by teachings that the Celestials left to their bastards who remained among men.

But if we are willing to read the Biblical text as if it means what it says, no more and no less, the Myth appears too consistent with modern data to be relegated without discussion to the realm of fables and legends. The context in which our working hypothesis places the

reconstitution I am proposing is thus clearly delimited:

1. We will adopt the most solidly established data accepted by modern ethnology.

2. We will correlate these data with texts which, according to our working hypothesis, *may* be a reflection of historical truth.

3. We will find that we thus obtain a *rational* explanation for a whole set of enigmas that would otherwise be inexplicable.

4. We will avoid believing that being rational is enough to make an explanation true.

5. We will nevertheless be able to maintain that our hypothesis is more plausible than the commonly accepted view.

Let us return to the beginning of the eleventh chapter of Genesis: "Once upon a time all the world spoke a single language and used the same words." In the Biblical context, only a few human generations separate the beginning of the eleventh chapter from the departure of the Celestials. In that context, the reality of the Celestials is not yet doubtful for "the nations," and neither is the "celestial ascendancy" of Noah and the dynasties that issued from him. The certainty that knowledge of the means of reaching "the sky" is part of the "revealed teaching" is—in this context—absolute. Trying to build a "tower with its top in the heavens" (Genesis 11:4) is therefore an undertaking consistent with the context.

A rather comparable situation occurred in World War II: some Americans who "came from the sky" landed among a primitive people and built bases in which life, for those primitives, was an "earthly paradise." At the end of the war the Americans went back "into the sky" after destroying (in a "Deluge") the equipment that they could neither take with them nor safely leave with a primitive people. In the hope of

making the "white gods" come back, the primitives built an airport with a control tower and airplanes made of branches, thus equaling the naïveté of the tower made of bricks and bitumen described in Genesis.

The comparison is not exact, however since celestial astronauts are not of the same order of magnitude as American aviators. What is comparable is the reaction of primitive societies transforming a historical reality into a myth—a myth that is not based on nothing, but on a naïvely interpreted reality.

When the celestial Elohim had left, the people of the Biblical text tried to build what they or their ancestors had seen in the time when the Celestials lived among men.

If the Celestials had been not the memory of a reality but a pure invention of the human imagination, the people of the Biblical text would have tried to "reach the sky" by climbing mountains, and not by building, *on a plain,* a tower not much higher than a hill.

They could not have expected a tower built on a plain to enable them to "reach the sky" unless they intended to use it for a launching—and it would be absurd to believe that primitives totally ignorant of advanced technology could have conceived the idea of launching a manned spacecraft.

If the Celestials had been a product of human imagination in protohistoric times, it would have been perfectly acceptable for them to appear "in the image of man"; what is absurd is to imagine primitives describing super*human* gods, that is, gods who erected on Earth an industrial infrastructure inconceivable to primitives.

When contemporary primitives studied by ethnologists still have myths that date from before their first contact with civilization, those myths speak of super*natural* gods who can rise into the air by sitting on

a carpet and saying, "Let there be flight." Before being in contact with a civilization possessing an industrial infrastructure, primitives have *never* conceived the necessity of even a symbolic "launching tower"—that is, an industrial infrastructure—for "reaching the sky where the gods live."

The rest of the Biblical narrative is no less coherent. "Then the Lord came down to see the city and tower which mortal men had built, and he said, 'Here they are, one people with a single language, and now they have started to do this; henceforward nothing they have a mind to do will be beyond their reach. Come, let us go down there and confuse their speech, so that they will not understand what they say to one another.' " (Genesis 11:5-7.)

Are we to conclude that it was not a naïvely symbolic tower that was being built at Babel? Are we to conclude that the things and teachings preserved by Noah really enabled people to do "whatever they had a mind to do," to the point of alarming the Elohim?

I obviously do not know. But it is enough to read the Biblical text to see that this is what it expressly says. And also to see that only on the hypothesis under consideration—that the Celestials implanted among Paleolithic people an industry inconceivable to Earthlings of that time—does the Biblical narrative become coherent from the first to the last line of the chapters devoted to the arrival, stay and departure of the Celestials.

When the Lord confused the speech of men, they could no longer understand each other and stopped building their tower. Did Yahweh "come down to Earth" in person? That would imply, for an explanation in conformity with both the Biblical text and what we know of space travel, that the Elohim had not yet left our solar system and were still preparing to launch

their spaceship from their spaceport on the moon. Was it simply "Yahweh's principle" that doomed to failure a construction that went beyond the possibilities of human beings, even those who had "revealed knowledge?" Here again, I obviously do not know. But I will point out that in both cases the Biblical story is self-consistent, and that this self-consistency is consistent with what we know about space travel, prehistory and ethnology.

The size of the "tower with its top in the heavens" was not that of a modern skyscraper; it has been preserved for us by a Buddhist myth in which a tower intended for the same purpose as that of Babel is called the "Meru Mountain" and has a height of 84,000 yodshanas. The yodshana is an Oriental unit of measurement that is sometimes equal to about four miles and sometimes about twelve. Even taking the lower value, 84,000 yodshanas would place the "top of the tower" within the moon's orbit.

(The information above is from *Die Religion des Buddha,* by Karl Koeppen, a work that is still authoritative as facts are concerned, though some of its conclusions bear the mark of the nineteenth century, which regarded space travel as a foolish delusion. "Reaching a height of 84,000 yodshanas is enough to withdraw any idea of rational value from the proposed structure," writes Koeppen. He could not, of course, have imagined our launching towers whose "tops" go to the heights indicated by the Myth which, thousands of years ago, either imagined them or reproduced them on the basis of an account that was in conformity with historical truth.)

If you will read Chapter 11 of Genesis, you can verify that I have not altered or omitted anything. The

Biblical text describes what our future astronauts would do if, having landed on another planet, they found themselves in the situation of the Elohim in Chapter 11: leaving a planet where the natives have finally become odious, they give their favorite bastard the "things and teachings" necessary for attempting to carry on the civilizing effort; when they see that the sons of the bastard in question have let the natives put together a makeshift launching tower, they prefer to jeopardize the success of the planned civilization rather than run the risk of having primitives reach the moon and find the cosmic installations intended for the descendants of Noah. (The Bible speaks of a "bow" which is a sign of a "covenant" and is "set in the cloud.")

Have we now reached the stage where we can legitimately claim the heritage? When the moon has been explored, we will know if that heritage exists.

Was it the sum of all knowledge having survived the "confusion of languages" that the priests "inscribed" in the Great Pyramid four thousand years later?

Was it by taking the "knowledge inscribed in the Pyramid" as his point of departure that a priest of Pharaoh named Moses succeeded, in the desert of Midian where he had gone to study, in overcoming the "confusion of languages" and writing the Biblical text on the basis of which I propose the hypothesis of astronautical installations waiting for us under the surface of the moon?

We will have to wait for exploration of the moon before we can have answers to these questions, on which I ventured hypotheses in *Les cahiers de cours de Moïse* and *Les dieux nous sont nés*.

But even now we can wonder if the imagination of Neolithic people, and that of Moses (even if it was strongly aided by Pure Chance), could have described the behavior of purely imaginary Celestials in a way

that tallies so closely with the behavior of concrete Celestials as we—who are about to become "Celestials"—can imagine it.

If you feel that this would be asking too much of Pure Chance, and if the Sunday-school God does not satisfy you, you are about to follow me in my hypothesis of the concrete reality of Celestials in our image, whose stay on Earth is related by the Biblical text in a coherent, rational way.

But what, then, is that Biblical text?

CHAPTER 5

Is the Bible a Mass of Nonsense Or a Coherent Text?

The Old Testament has two parts: the Pentateuch, that is, the "Five Books of Moses," which the Synagogue calls the "Law of Moses"; and the "Historical and Prophetic Books" and "Inspired Writings" (such as the Book of Job and the Psalms), intended for interpretation of the Pentateuch.

The "Five Books of the Law" are Genesis, Exodus, Leviticus, Numbers and Deuteronomy.

Genesis relates (in fifty chapters) the events between the arrival of the Elohim, on an Earth surrounded by clouds, and the death of Joseph, holder of the "divine revelation" received by Abraham. The attempt to build the tower of Babel is in Chapter 11; Chapter 12 opens with the "revelation" given to Abraham; in the fiftieth and last chapter, Joseph dies after becoming Pharaoh's respected adviser. Exodus begins with the appearance of a new pharaoh who will reject Joseph's teachings.

In this first stage of human transmission of the teachings that came from the sky, must we go on taking the story literally? Scientific method requires us to do so: when we take a text, we have no right to pick and

choose within it; we must either take it or leave it, all of a piece.

When "Elohim" is given the meaning of "Immaterial God," the text is a mass of nonsense. When the text is read as if it means what it says, no more and no less, it appears self-consistent, with its Elohim "in our image." Is a good fairy tale also self-consistent? Yes, of course; but the internal consistency of the Biblical text agrees with solidly established modern data, in a way that makes it hard to attribute that agreement to Pure Chance.

When everyone scattered after the "confusion of languages," Abraham's parents left Chaldea and settled in Harran (in what is now Syria). The dominant power of the time was Egypt, a Biblical datum confirmed by historians. It was then that Abraham had his "revelation." It prompted him to go south, and therefore in the direction of Egypt. He stopped at Shechem, in Palestine, and his "revelation" promised that land to his descendants.

"Revelation" is a word that has taken on a bad odor from being chewed by charlatans and visionaries; yet Descartes did not hesitate to use it when he wrote that he had had "the revelation of an admirable knowledge." If reading the Biblical text as I propose shows that it is coherent and Cartesian, we must conclude that "Abraham's revelation" was Cartesian.

Abraham was not a "Jew." He found it quite natural that his god should ask him to sacrifice his oldest son, whereas any human sacrifice is an abomination for the Law of Moses. Everything we know about him, we know from the Bible ("legends" characteristically gloss over such embarrassing details).

Are we to conclude that Abraham was a pagan, an idolater? Yes and no. Yes because he never knew Yahweh by name (as is explicitly stated in the sixth

chapter of Exodus) and he worshiped the god Shaddai until his death. No because, unlike the animists, he never doubted the reality of the Elohim, whose "revealed heritage" he rediscovered after the attempt to build the tower of Babel.

In the time when Abraham had his "revelation of an admirable knowledge," the highest learning was held by Pharaoh's priests, heirs of the architects of the Great Pyramid (built in about 2700 B.C., several thousand years after the "Deluge" and long before Abraham's birth, which historians date at about 2000 B.C.). Chronologically, this is quite coherent.

To speak the Biblical language, the Hebrews (landless, as was normal for a youngest son) are symbolized by Jacob. The text shows him supplanting Esau who, like Pharaoh, had the right of the first-born. But Abraham's "revelation" told him that Pharaoh was about to yield to the seduction of material goods and that he must be willing to "sell his birthright" for a "mess of pottage."

Abraham's "revelation" thus appears to be Cartesian, that is, based on information left by the Celestials of my hypothesis. But Abraham let himself be carried away in a thoroughly un-Cartesian way: he hurried to Egypt and then had to leave when it became obvious to him that Pharaoh had a firm grip on everything and was not at all willing to give up his birthright. It is remarkable that the Bible, with no trace of a "personality cult," describes this error of judgment by Abraham.

So Abraham went back to Palestine.

As we will see in Part Two of this book, the religion of Amon the ram (Aries), which succeeded that of Apis the bull (Taurus) in Egypt, is perfectly in accord with astronomical data. These data appear in Judaism after the "Sinai revelation" received by Moses, and in the

fish (Pisces) religion of Christianity.

Jacob, son of Isaac and grandson of Abraham, studied his grandfather's "revelations" more deeply. He saw "in a dream" the ladder connecting his lineage to the message left by the Celestials. He was given personal "revelations." He "wrestled" with a "man" who, at the end of the struggle, revealed that he was not a "man," but a "messenger from the sky," and gave Jacob a new name: Israel, which means "capable of striving with the Celestials."

Jacob-Israel engendered Joseph, "son of Israel," whom the Bible shows us depriving Esau of his birthright and supplanting the priests of Amon in their role as Pharaoh's theologians and advisers.

Was that succession of "revelations" and dream interpretations, with fat and lean cows parading through them, a mass of metaphysical nonsense? Or were they "revelations" in the Cartesian sense of the word which enabled Joseph, by means of a better interpretation of rational data inherited from the Celestials, to supplant the priests of Amon, who had fallen into superstition and finally come to believe their own claims about the power of praying to a stone ram?

This second interpretation seems more rational. But that is not the problem.

The real problem is to determine whether Pure Chance is enough to explain how the Biblical text—with its Elohim, its Yahweh, its Shaddai and its "Cabalistic" usurpations of the birthright—gives us a story in conformity with a historical truth whose knowledge by Moses is enough in itself to cause amazement.

The Hebrew people actually did wander as described in the Biblical text that was written several centuries later.

No historian has ever pointed out anything which, in

Abraham's time, could have justified predicting that Egypt would soon begin to decline.

Only three centuries after Abraham, in about 1700 B.C., Egyptian power was shaken by the invasion of the Hyksos.

The new pharaoh with whose reign Exodus opens began by rejecting the teachings that Joseph claimed to have inherited from the celestial Elohim. This amounts to saying that Pharaoh went back to the "idolatry" condemned by Joseph, which consisted in worshiping stone idols rather than trying to reconstitute the cultural heritage left by the mortal and rational Elohim.

Moses was an initiated priest of Amon and the presumed son of Pharaoh's daughter. At the time of his appearance in Exodus, Egypt had fallen into idolatry. He left hurriedly and went to Midian where "the angel of the Lord" appeared to him (Exodus 3:2).

Was that "angel" a Celestial who had returned to Earth on an inspection trip? At this point I will dispose of a few neo-obscurantist distortions. We must never lose sight of the scale on which the universe is measured. Cosmic distances are expressed in light-years, and a light year has a lot of miles in it (about six trillion, to be more specific). The moon is one and a half light-*seconds* away from the Earth. At the speed enabling a man to reach the moon in three days, it would take him 180,000 years to cover a light-year, and a little less than a million years to reach the nearest possible planetary system.

In view of that, a non-scientist may wonder why no scientist has concluded that going to another planetary system is impossible.

Let us simplify drastically. Until Einstein. our science reasoned on the basis of a static universe for which Euclidian geometry (which considers only space) was

sufficient. In the nineteenth century, the telescope and the microscope began turning up facts that did not "jibe" with the static Euclidian universe. Science was changing its scale. It was observing phenomena in which velocity was a factor—and velocity, the crossing of a given space in a given time, marks the transition from the concept of a "space universe" to the concept of a "space-time" universe.

It was for this space-time universe that Einstein formulated his famous equation, $e=mc^2$, which was experimentally verified when scientists succeeded in extracting energy from mass in the nucleus of the atom. (The quantity of energy *e* is equal to mass *m* multiplied by the square of *c*, *c* being the velocity—that is, the space time—of light.)

On the scale of the universe visible to the naked eye, in which time has practically no effect on space, Euclidian geometry is, of course, still true. It is simply *inadequate* on the atomic and cosmic scale.

Will the Einsteinian scale also prove to be inadequate? The impossibility of maintaining that it will not is what prevents scientists from concluding that interstellar travel is impossible. Even so, such travel is as "unimaginable" for us as nuclear energy was for people at the time of the first railroads.

Even if we assume that the problem of aging by astronauts who travel distances of several light-years has been solved, there is still the problem of propulsive energy. The *quantity* of energy required is a known fact; it is the possibility of *producing* it that is excluded from the Einsteinian universe, in which the quantity of energy *e* that can be drawn from a mass *m* is limited by the factor c^2, since no material body can exceed or even equal the speed of light without being transformed into photons. Nothing permits us to contest that. But. . . .

But a few physicists and mathematicians speak of a contraction of space-time and, for lack of any conceivable experimental verification, no one can say if they are merely letting their minds wander or if they are about to do to the Einsteinian universe what Einstein did to the Euclidian universe. The whole thing takes place on a level where it will be better for us to skip over the equations and limit ourselves to the conclusions: traveling distances measured in light-years, without aging prohibitively, is a hypothesis that can be formulated, and so is its corollary of obtaining the required energy.

I said above that experimental verification of this is inconceivable. Actually, however, it becomes not only conceivable but imminent when the view presented in this book is accepted as a working hypothesis: if traces of earlier astronauts are discovered on the moon, there will be proof that, as the Bible says when it is read as I propose, physical beings have traveled distances that are impossible to travel in the Einsteinian concept of the universe.

We will not have long to wait, but for the moment all we can say is that in no case can interstellar travel be the kind of tourism blithely imagined by naïve people for whom a "visitor from space" is something like an improved aviator who comes to take a look at our planet, then opens up the throttle and flies away.

The Celestials of the Biblical story are plausible because all their achievements are on the scale of their supposed interstellar travel: super*human* but always rational and never super*natural*. The process of putting our planet back in order was spread over a dozen millennia, and therefore over many generations of Celestials. When Jacob "wrestled" with an "angel" (Genesis 32) and Moses "heard" one (Exodus 3),

several thousand years had gone by since the departure of Elohim. Are we going to sink into the irrational neo-obscurantism of "little green men" and other "Martians?"

A Celestial would not have come alone from another planetary system. An interstellar journey would not have been made for the sole purpose of giving a few words of advice. If Moses had met a Celestial, he would not have been given a staff that changed into a snake, but a machine gun or some other weapon more effective than the ten plagues—and history would have preserved a memory of it. If the Elohim had come back, it would have been to take Earth in hand again, or at least to place Moses on the throne of Egypt, rather than making him the leader of a wandering people.

Even so, *on this point* I must leave established facts and enter the realm of rational speculation. If Moses "heard" an angel and Jacob "wrestled" with one in the way that you and I may "hear" Aristotle or "wrestle" with Plato, the Biblical text is consistent both with itself and with modern data.

Am I proposing a gratuitous assumption here? Moses said he heard an angel. The only way for us to know if that was only empty talk or if he really acquired rational, super*human* knowledge, with nothing supernatural about it, is to see what happened next.

What happened next seems to indicate that Moses had actually gained knowledge that his contemporaries could not have acquired. We see that knowledge being put into practice immediately. We can classify it under three headings:

1. The "theological" elements on which he founded the "Israelite religion."

2. The promise of a "Law" which, by a kind of Pavlovian conditioning, would give the "chosen peo-

ple'' a toughness and durability that contrasted with the fragility of the powerful ''idolatrous'' empires.

3. The ''technical'' knowledge whose practical application forced Pharaoh to let the Hebrews go, even though he had great need of their labor for his ambitious projects.

The heading of ''technical'' knowledge is the one that appeals most strongly to the imagination—that is, the one that makes us most inclined to leave the solid ground of rational hypotheses and wander into the shifting sands of gratuitous speculation. It is tempting to imagine knowledge of drugs that enabled Moses to afflict the Egyptians with an epidemic whose antidote was known only to the Hebrews. For each of the ten plagues of Egypt, it is tempting to propose an explanation in conformity with what we know about bacteriological and psychological warfare. Let us resist those temptations and stick to the established facts: the Hebrews were captives in Egypt; Pharaoh had no reason to let them go; Moses forced him to give them their exit visa.

This indicates that Moses came back from Midian with concrete ''technical'' knowledge superior to that of Pharaoh's priests. The ''Pavlovian conditioning'' that was to assure the durability of the Hebrews appears equally incontestable when we consider later events.

When King Solomon died six hundred years after Moses, a schism split the Hebrew people into the Kingdom of Judah and the Kingdom of Israel, which was by far the larger of the two. The people of Israel were more tolerant; they favored a ''modernization'' of the Law and peaceful coexistence with ''idolators.''

Nothing remains of the Kingdom of Israel. The Hebrews who belonged to it were lost like a handful of sand in the desert. The much less numerous Judeans

were still flourishing at the dawn of the Christian era, with their Biblical text transmitted "without changing a single letter," the same text whose coherence we are now ascertaining, and on which the Judean Jesus, aided by his small band of Judeans, founded Christianity.

At the dawn of historic times, China, India and Persia, like Egypt, had a Tradition which their priests claimed to be thousands of years old and which was essentially the same as that of the Hebrews, except that the Elohim were called "gods" or "Celestials." The Orient was already declining when Christ was born, but its civilizations were still far superior to the barbarism of Europe at the time when it was taken in hand by Christianity, heir to the Law of Moses. As we will soon see, that Law of Moses involves the promise that its adherents will engender "gods" who will "renew the acts related at the beginning of Genesis."

And now, because it seems that this promise is about to be kept and that my hypothesis will soon be proved or disproved, I can rationally propose the possibility of traces (or even a "message") waiting to be discovered on the moon.

There are still the "theological elements." In Part Two of this book we will see that, with no trace of "theology fiction," the symbolism of the successive Egyptian, Jewish and Christian religions can be shown to be totally lacking in metaphysics. That symbolism is always rigorously linked to a concrete, rational astronomical concept.

We do not have to *believe,* but only to *note* that the pope's triple tiara succeeds the pharaoh's double pschent and that this corresponds to an "esoteric symbolism" so rigorous, in the churches which have dominated the world in their respective eras, that it cannot be attributed to coincidence. ("Coincidence" is

the name that worshipers of Pure Chance erected into an idol which provides an answer to the "miracles" of their faith.)

We will see all that in Part Two. Meanwhile, we must examine the nature of Hebrew, the language in which the Biblical text is written.

CHAPTER 6

Hebrew, A Language Not Like Others

Moses was raised in the language of Egypt, but when he returned from Midian with his Law, intended for a people speaking the language of Canaan, he wrote it in Hebrew.

It is not often realized that because of the Pentateuch. which succeeding generations have read, discussed and recopied with scrupulous accuracy, Hebrew has remained intact and unchanged since the remote centuries when Latin was barely beginning to evolve from one of the Italic dialects (Latin was not given a definitive form until about 240 B.C. by Livius Andronicus).

The Greek language, already constituted in the time of Homer (about 900 B.C.), was divided into dialects: Old Ionic for Homer, New Ionic for Herodotus, Doric for Theocritus, Old Attic for Aeschylus, Middle Attic for Plato, New Attic for Demosthenes, and so on. The difference between those ancient Greek languages and modern Greek is of the same order as the difference between Latin and French.

The Hebrew written by Moses is identical to the Hebrew written by Israeli journalists today.

Hebrew has not varied because it *cannot* vary. In this respect, there is no other language like it in history.

When the Dead Sea Scrolls were found, there was no deciphering to be done: they had only to be read. The Hebrew alphabet goes back to the time of the Egyptian hieroglyphics whose deciphering made Champollion famous.

Whether the Pentateuch was written by Moses or is only attributed to him is an unimportant detail, like the question of who wrote the works of Shakespeare: the Pentateuch exists and is a literary monument for Hebrew, as Littré, Racine and Victor Hugo are for French.

But the language of Littré, Hugo and Racine is a product of the gradual development, through written and spoken usage, of a language whose birth certificate is found in the oath sworn by Louis II in 842: *"Pro Deo amur et pro christian poblo et nostro commun salvament, dist di en avant. . . ."* Only eleven centuries have passed, but while modern Frenchmen can grasp the general meaning of that nascent French, they must already "decipher" to understand that *"dist di en avant"* means "from this day forward."

Hebrew is completely different in this respect: the literary monument, the guide to good usage, has not changed since the Pentateuch, and Moses lived earlier than Rameses II, who erected the obelisk transplanted to the Place de la Concorde in Paris. And we must bear in mind that the Old Testament is also the Chosen People's law code, history and prophecy of the coming messiah.

There have been modernizations in ways of writing Hebrew letters, but that has never had any effect on scrupulous respect for the text. Here is an example. The Hebrew equivalent of the letter "m" has two forms, one used at the end of a word, the other used in all

other cases. (This was once true of the letter "s" in European languages.) In the Book of Isaiah there is a misspelling: a terminal "m" in the middle of a word. For twenty-three centuries Cabalists and Talmudists have been discussing the reasons for it, but respect for each letter of the text is so strong that in the most recent editions of the Bible in Hebrew, the misspelling is still there.

What was Hebrew before the Pentateuch? That is the whole problem: it was nothing. The Hebrew of the Pentateuch has no idioms of the kind found in all languages that were spoken before they were given a relatively stable form in writing. Jewish tradition makes no mention of any text written in Hebrew before the Pentateuch (except for the Book of Job, which may be earlier).

In *Les langues du monde,* a collective work edited by A. Moeillet and Marcel Cohen, Hebrew appears at the date of its first known use—that is, later than Canaanite and Aramaic. If Hebrew is "a language like others," it came from Canaanite, which in turn came from "Northwestern Semitic."
it came from Canaanite, which in turn came from "Northwestern Semitic."

But Hebrew is not a language like others.

In Hebrew there are no figures; the twenty-two letters have numerical values. In itself, this is not unusual: the same thing occurs in Greek, and in Latin, where the letters C, D, I, L, M, O, V and X are also figures. What is unique in Hebrew is the coherence that appears in studying the Biblical text in relation to the numerical values of the words that compose it.

This is surprising enough to deserve a closer look.

The Hebrew alphabet contains twenty-two letters; units are represented by the first nine, tens by the next nine, hundreds by the last four. Thus each word written

in Hebrew also represents a number, and the search for an "esoteric meaning" in the text, expressed in figures through words, constitutes gematria, one of the "ways" of the Cabala; we will see an example of it in the next chapter.

Gematria has a poor relation: numerology, which enables complicated-simplistic people to conclude that Louis XIV was a predestined monarch because he ascended the throne in 1643 (1 + 6 + 4 + 3 = 14), began ruling after Mazarin's death in 1661 (1 + 6 + 6 + 1 = 14) and died in 1715 (1 + 7 + 1 + 5 = 14). If the purpose of the Cabalists' gematria were to seek "miraculous correlations" of this kind, it could be put in the same bag as Louis 14 numerology and other arithmetical parlor games.

Cabalists are serious and cultivated people? Yes, of course, but that proves nothing: a college professor who talks nonsense is more dangerous than a plumber who hears voices. What makes it wrong to brush aside Cabalists and the Cabala is the object of their work and the results they obtain.

Cabalists study a *text*; that is, something which—for me—represents a concrete creation with nothing supernatural about it. In that text which, as we have seen, has a rigorous, rational coherence, Cabalists discover through gematria an equally rational and rigorous coherence, expressed in the numerical values of words.

In the hands of Cabalists, the Biblical text appears as a crossword puzzle in which the meanings and numerical values of words fit together in a logical coherence, by a method that remains consistent from one end of the enterprise to the other.

Is that coherence only a form of mental gymnastics, like a crossword puzzle that yields nothing but the satisfaction of having solved it? We will seek an answer to that question in the next chapter. In this one, we have

plenty of questions about Hebrew as a language not like others:

Is it possible that a language with such coherence came from Canaanite in the same way as French came from Late Latin?

Is it not more rational to consider that Hebrew did not "come from Canaanite" any more than man "came from the ape?"

Having appeared after Canaanite, as man appeared after the ape, Hebrew would then be a "distinct branch," as man is a "distinct branch" among the upper primates.

Stated more directly, this amounts to asking if historical truth is found once again in the Biblical text, and if that text was given by the Egyptian-speaking Moses to the Canaanite-speaking Hebrews in a language that was the *root* of the Semitic languages; that is, the language of the "angel of the Lord."

Is Hebrew what is known as an artificial language, like Esperanto? Cabalistic mathematicians have studied the possibility of using computers to construct an artificial language with the internal structural coherence of Hebrew. To the best of my knowledge, they have achieved no conclusive results, except to confirm an obvious fact: it would be ludicrous to imagine that a language structured like Hebrew could have arisen in a primitive society.

If your faith in Pure Chance or God is strong enough to let you attribute the origin of the Hebrew language to either of them, you are lucky. If you see a *rational* explanation other than "my" Celestials, please let me know what it is. Thank you.

CHAPTER 7

The Cabala

For a Cabalist, the Biblical text is an account that can be used "as is," a coded message and a self-sufficient coherence whose correlations with everyday reality have never been exhausted. It is a monument and a mechanism, an accurate reflection of the "immaterial principle" whose law governs the universe as it appears in the telescope and the microscope: identical for electrons and galaxies, and destined to define the place man occupies in that great whole which is subject to the One Principle. All Cabalists agree on one point: the Biblical text *cannot* be the work of one or more Neolithic men.

For Cabalists who "believe in God," the source of the Law of Moses is "God"; others are still trying to find the source. None of them accepts Pure Chance, a divinity for idolaters who, to use Albert Einstein's expression, believe that "God plays dice" and that consequently there can be realms which escape the One Principle.

The strange part of it is not that Cabalists are thus in agreement with modern scientific concepts, but that they expressly professed this, and nothing else, all

through the millennia when "reasonable scientists" professed a "humanism" that made man the center of the universe.

A corollary to the strangeness above is that Cabalists, who were the scientific concepts of a time when "towers with their tops in the heavens" have been built at Cape Kennedy and Baikonur, have always based their reasoning on a text which "reasonable humanists" regard as a mass of nonsense that agrees with reality only by chance. By *what* chance?

Emile Borel, a member of the French National Institute, illustrated his theory of probability by showing that if enough monkeys pounded the keys of typewriters for a long enough time, it would be mathematically certain that one of them would type the complete text of the *Aeneid*. The Dogma of Pure Chance states that there is nothing to preclude the possibility that a monkey will type the *Aeneid* on the first try; the cult of Pure Chance is based on the belief (occasionally accompanied by prayers) that the first try will be the right one. For a devout worshiper of Pure Chance, the *Aeneid* may be the work of an orangutang.

Could Neolithic brains have been the source of the internal coherence of the Cabala, the correlations between the Biblical text and modern scientific realities, and the structure of the Hebrew language? To believe that, it is necessary (but sufficient) to believe that Neolithic people received the Revelation of the Orangutang, Son of Pure Chance, crucified by Emile Borel.

And if you refuse to believe that, you are faced with a choice: either inspiration from the Immaterial Word or a rational teaching given by "my" Celestials.

It still remains to be seen, of course, whether the coherence, correlations and structure that prompt me to state that choice really exist or are the product of an

illusion. (For the theologians of Byzantium, there was no choice to be made: "their" Celestials were an "emanation of the Immaterial Word.")

Alexandre Safran, head rabbi of Geneva, has written an authoritative book, *La Cabale*. Although it does not claim to exhaust the subject of the Cabala, it contains no untruths. I will give a few quotations from it to shed some light on what we are discussing:

"The Cabala is older than the Revelation of Sinai. It goes back to prehistoric times. Moses only introduced it into the history of Israel."

"Moses received (*kibel*: from this term 'Cabala' is derived) the Torah ('Teaching,' 'Law') on Mount Sinai."

"The Cabala belongs to the mystic universe. But this does not mean that it can be reduced to a speculative mystic science, or a mystic 'technique.' "

"The Cabala does not conceive sudden 'illuminations' that make reason useless."

"The Torah will not be 'uncovered,' 'revealed' in its entirety, until the initial Light of 'first facts,' embracing both the material and the spiritual world and once perceived by man before the Fall, again appears to restored man."

"Man will renew the acts related at the beginning of Genesis."

This rapid survey brings out four points directly related to our subject:

1. The Cabala goes back to the prehistoric times from which arose the real or imaginary memory, common to all the First Civilizations, of a stay on Earth by the Celestials.

2. Appearing as gods on another planet ("renewing the acts related at the beginning of Genesis"), having a "revelation" of the meaning of the Law of Moses and understanding "first facts" are three things that go

together and will be accomplished more or less simultaneously.

3. The method of Cabalists is the same as that of scientists; both are opposed to the illuminations of the ignorant.

4. Even so, the Cabala belongs to "the mystic universe," into which a rational man ventures only on tiptoe, clutching the railing.

But these are general ideas that remain abstract without a concrete example. The fourteenth and fifteenth chapters of Genesis give us one that is sufficiently simplifiable for our purpose. In Chapter 14, Abraham learns that Lot is being held prisoner by an enemy king. He mobilizes "his retainers, men born in his household, three hundred and eighteen of them," leads them off to war and delivers Lot. In Chapter 15, the Lord promises Abraham a great reward. but Abraham is not happy because, he says, "I have no standing among men, for the heir to my household is Eliezer of Damascus."

Practicing the Cabala consists in pointing out that there has been no previous mention of this Eliezer and he never appears in Abraham's life again; that the numerical value of the letters forming the name "Eliezer" is 318, the number of warriors born in Abraham's household; and that Chapter 14 and 15 are thus written like a check: "three hundred and eighteen" first in letters, then in figures ("Eliezer").

After these observations, the reasoning begins. Its object is to determine which of the two disclosures is the one to be singled out, the other being only a confirming repetition. If it is that there were 318 warriors and not 317 or 319, "Eliezer" is a confirming repetition. If it is that Abraham was victorious with the aid of only one warrior, "three hundred and eighteen" confirms the spelling of Eliezer's name.

In the first case, comparison of this passage in the text with some other passage in which 318 also appears as a key number must lead to the discovery of a hidden meaning: the possibility that the repetition may be the work of chance is excluded.

In the second case, that Eliezer who was able to vanquish an army all by himself is not a man, but a Celestial—or a text left by a Celestial named Eliezer, a text whose correct interpretation by Abraham assured him of victory better than 318 warriors could have done. A flesh-and-blood Celestial or a text? The question can be discussed for days on end, so I will not even begin.

Cabalists are not ignorant visionaries. They always have a good college education, often in one or more of the sciences. They express themselves in coherent language and their conclusions are as communicable as those of philosophers or physicists. And they devote their lives to studying a text in which there are Elohim whose sons impregnate the daughters of men, in which each word counts and in which *nothing* can be attributed to "naive belief," a text written in a language that has no equivalent among Earthly languages.

Having reached this point, a rational mind has to ask how other minds, apparently also rational, can seek a rational coherence in the labyrinth of the Cabala.

A good part of the answer lies in the idea that has been formed of Aristotle's *Logic*, which stated as a fundamental axiom that a thing either is or is not, that nothing can simultaneously be and not be.

Aristotle was wrong. Or perhaps what is wrong is the idea of Aristotle formed by positivists who appeal to his authority in claiming a monopoly on rational thought. Let us take an example:

One night when he was drunk, Dupont saw a pink

elephant come into his bedroom and sing an aria from *Carmen*.

I know Dupont and I know he never lies. If he says he saw a pink elephant, he saw one; and that elephant *exists* so surely that its existence will have a concrete effect on Dupont's whole future. But I went to his apartment and saw no trace of the damage that would inevitably have been done by an elephant like the one he describes. That elephant therefore exists *and* does not exist, simultaneously.

Am I confusing "material existence" and "psychic existence?" If I were, I would not be the first: that very confusion is what makes positivists regard the "psychic universe" as only a reflection of the material universe. But I am not making that confusion.

Dupont has a tape recorder on which he has recorded an aria from *Carmen* sung in a voice bad enough to be a pink elephant's. I do not know what Dupont's voice sounds like when he has had too much to drink. I do not know if, under the influence of alcohol, he may not have invited, recorded, sent away and forgotten a singer with the voice of a pink elephant.

I know only that if I began reasoning about seen reality and the reality of the recorded voice, rejecting because of "Aristotelian incompatibility" the non-reality of the same elephant attested by the absence of damage, I would reason falsely, on the same principle that makes positivists reason falsely. Yes: in the opposite direction, but on the same principle. There are no miracles; it is not Pure Chance that moves positivists and visionaries of the Biblical text in opposite directions. That text is a *reality;* in it, anyone can read what it says. which corresponds to a *reality*, a colonization of Earth by Celestials. In their "mystic universe" (that is, an *unreal* universe), do Cabalists claim to find in the *real* text of the Bible a meaning as

"enigmatic" as the pink elephant's voice recorded by Dupont? Let us not reject them in the name of "Aristotelianism"; let us judge them on the basis of the evidence. Here is some of that evidence:

The Cabala promises man that he will renew the acts related at the beginning of Genesis. Man is about to renew the acts related at the beginning of Genesis: the "spirit of man," in an unmanned capsule, has already flown over Venus and sent back a description that I will take from Genesis 1:2: "without form and void, with darkness over the face of the abyss."

Will this "renewal of acts" go to the point of colonizing another planetary system where life, by natural evolution, has reached the equivalent of our Paleolithic? A number of astrophysicists think that it will, in the more or less distant future.

Will that "renewal" begin with discovery on the moon of an underground base or other *real and certain* evidence that other astronauts were there before ours? I think so, and I hope you are beginning to know and understand why some Cabalists may not disagree with me.

It is time to return to the reasons that those who mistrust any "mystic universe" may have for accepting my hypothesis.

CHAPTER 8

The State of Israel and Cabalists

It is not necessary to "believe in God" to be a Cabalist, any more than it is necessary to believe in the Cabala to recognize that the State of Israel exists, has been solidly built by realists, and has been able to replace the spirit of the ghetto with the spirit of David's soldiers.

The idea of creating a Jewish homeland was launched in 1896 by the Hungarian writer Theodor Herzl and was taken up by the founders of Zionism. They were generally socialist intellectuals; many of them did not believe in God, and some of them were even militant atheists. Yet they were all convinced that regrouping people who considered themselves Jewish, or were regarded as such by anti-Semites, could be done only within the framework of the Biblical text.

South America offered abundant land that Jewish immigrants could have acquired without opposition. A certain number of Zionists were attracted by this idea—and they disappeared, as the Hebrews of the Kingdom of Israel disappeared: some are now in Israel, others have remained in their original countries and ceased to be Jews. In the context of its policy of

"nationalities," the Soviet Union created an Autonomous Jewish Republic. No one opposed the project and no one showed any enthusiasm for it; it sank into the indifference in which false ideas die.

In the face of all obstacles, surrounded by enemies but indestructible, only one of the countless solutions proposed for the "Jewish problem" has become a solid reality: the one that consisted in installing the Jews in the land promised to Abraham, according to the Bible.

What part did Cabalists play in the creation of the State of Israel, and what part do they play in the country today? That question can be given as many answers as the question of what part is played in France by Freemasons, university graduates or pupils of the Jesuits: they occupy positions in keeping with their competence, but the influence attributed to them depends much less on reality than on the opinion of the person who does the attributing.

Israeli military leaders like to recall that the Biblical text has often inspired their strategy and tactics; Israeli antimilitarists maintain that the military leaders say this only to give the idea that they know how to read. But during the Six-Day War, Israeli soldiers showed that winning victories over forces with a vast numerical superiority, as happens all through the Old Testament, is not impossible for an army that sufficiently outclasses its enemies.

Did the Hebrews of Biblical times outclass, in technology and intelligence, the peoples who occupied territories that are now part of Egypt, Syria, Jordan, and so on? Perhaps so, but was it possible for a small people, traveling in the desert with women, children and baggage, to be *militarily* superior to the organized army of professional soldiers sent against them by Pharaoh? Could they have been technologically and intellectually superior to that army? Historians who

confirm the Hebrews' victories show them leading in Egypt, before the Exodus, the same life as other captive peoples there; if they had been intellectually superior, Pharaoh would not have used them for unskilled labor.

It may be, of course, that some sort of primacy on the part of the Hebrews in Egypt has escaped historians. But two facts remain: first, the small Hebrew people survived, while the powerful empires that fought them now live only in history books; and second, the Kingdom of Judah, which remained scrupulously faithful to the Law of Moses, survived, while the Kingdom of Israel, which favored compromise with "idolaters," disappeared.

Is it because they "believed in God" that the Hebrews, and later the Jews, survived in spite of everything? For those willing to explain the unknown by the Unknowable, the answer, of course, is yes.

But for others. . . . They tend to see that Immaterial God—who demands respect like a drill sergeant but constantly lets himself be defeated all through the Old Testament and proves to be incapable of imposing respect for his Law—as a rather feeble-minded god, judging from the way he is presented at the beginning of Genesis translated for simple souls. According to all common versions of the Bible, God created light, saw that it was good, then called the light day and the darkness night. In other words, the all-powerful Creator of the universe needed experimental verification and was amazed to find that he could see better in daylight than at night.

But the same passage, read as I propose, is perfectly coherent and clear: having found that Earth was surrounded by the opaque clouds of the Würm III glaciation, the Celestials made an effort to disperse those clouds, saw that sunlight could pass through them and congratulated each other on their success. (Those

who like finishing touches will find a corroboration of this thesis in the thirty-eighth chapter of the Book of Job.)

When the Bible says that serious mishaps lie in store for those who transgress the Law of Moses, are we to take it literally? Should we persist in reading the Bible as if it means everything it says, no more and no less, and refraining from introducing into it the Sunday-school God who is only a slightly improved version of Zeus?

I do not know if we *should* read the Bible that way, but it is a fact that the Bible appears coherent and rational when it *is* read that way.

"My" Celestials can be conceived only as highly superior to us in knowledge.

They left us the Law that was known to the builders of Babel, then lost, then rediscovered by Moses.

For Cabalists, that Law is a constitution, a law code, a psychotechnology and something more.

Failure to respect that Law brings on mishaps as automatically as failure to respect Carnot's principle leads to designing motors that do not work well.

Trying to find something better than the teaching of the Celestials does not lead to delusions and mishaps by Pure Chance, but for perfectly rational reasons—which will be "discovered" when man has "equaled the Elohim."

CHAPTER 9

Yahweh and Carnot's Principle

For religious Jews, "Yahweh" is the "Ineffable Name" that is forbidden to pronounce or try to imagine (in the strict sense of "represent by an image," and also in the usual figurative sense). Forming an image of Yahweh (as a bearded man, for example) is a natural tendency which Jews regard as specifically "idolatrous." John the Evangelist translated "Yahweh" as "the Word," a term that has the virtue of being "non-imaginable."

In the Biblical text, Yahweh constantly appears as the "leader of the Elohim," but he sometimes speaks to Moses, and if the Celestials had still been in the habit of paying visits to Earth in the time of Moses, it would have been known. When he speaks to Moses, however, Yahweh presents himself as immaterial and the source of the Law that governs Earth and "the heavens."

Immaterial and the source of a law—that enables us to *conceive* of him (without imagining him) as comparable to what Carnot's principle is in the realm of thermodynamics.

Thermodynamics is the branch of physics that deals with relations between motion and heat or, more

specifically, the transformation of heat into energy. The Immaterial Principle from which all the laws of thermodynamics are derived is called Carnot's principle. Carnot (1796-1832) did not "create" anything; he formulated the "law of laws" for all thermal engines, which transform heat into energy; any thermal engine must have a *hot source* (combustion of gasoline in the case of a car engine) and a *cold source* (car radiator) whose function is to dissipate part of the heat; any engine that does not dissipate enough heat will stop running (when the radiator overheats, the car breaks down).

This brief sketch enables us to understand in what sense thermodynamics is "subject to Carnot's (immaterial) principle." An engine maker who does not respect Carnot's principle as Cabalists respect the Immaterial Yahweh will suffer mishaps: his engines will stall.

I remember a professor who, when one of us thought he had found a system of perpetual motion—that is, something "better than Carnot"—and proudly presented it to him, would sternly say, "No, you're mistaken: Carnot says that. . . ."

That Carnot who spoke through the mouth of my professor strongly reminds me of the Yahweh who spoke through the mouth of Moses.

But was that Yahweh the "leader of the Elohim?"

I offer my interpretation for whatever it may be worth. If the leader of the Elohim was always saying to them, "No, you're mistaken: Yahweh says that. . . ." Or if, more simply, he had given himself the not-so-absurd title of "Vicar of Yahweh," it is conceivable that the Elohim customarily gave the name of Yahweh to their hereditary king or elected president.

"Yahweh" is the weak point of my thesis, not because his interventions are hard to explain, but

because several equally convincing explanations come to mind. So it seems best to stick to the text taken literally: when he "speaks to Moses" in Exodus, Yahweh "speaks" as a professor may make Carnot "speak"; when he speaks and acts from the beginning of the story to Noah's farewell, Yahweh speaks and acts as the "leader of the Elohim."

CHAPTER 10

Yahweh and Einstein's Mathematical Orthodoxy

In *La Cabale,* Alexandre Safran gives an idea of what he understands by "God": "The Cabala aspires to unity through thought and action; discovering it means reaching the Essence of Reality, which is God."

For Einstein, the essence of reality was a "unified field." But that does not get us very far because Einstein died without having succeeded in formulating equations that would have enabled us to put together our own picture of that "unified field," as the equation $e = mc^2$ enables us, if not to understand relativity, at least to know that it exists and that if we read enough popularized scientific books on the subject we will eventually form an idea of what it is.

In the present state of things, "unified field," "God" and "essence of reality" are only words, Spanish inns to which everyone must bring what he expects to eat. But a reality can be discerned behind the words: whether someone is a believer or not, whether he seeks "the essence of reality" in theology or science, as soon as he reaches a certain level he is led to

seek that "essence of reality" in some sort of "Unique Principle."

Did the Cabala (which Alexandre Safran and all other serious Cabalists show as having come from prehistoric times) profess its "monotheism of the One Principle" by intuition? Did researchers whose subconscious minds had been fashioned by monotheism for thousands of years engender the science of the West, which seeks "the single equation of a unified principle called a field," by a process of spiritual evolution analogous to the evolution of natural species that led to either human beings or apes, depending on an "option" accidentally taken by their first ancestor? Or was that initial "monotheism" revealed rather than intuitive? If it was revealed, was it revealed by Celestials who "emanated from God" or by Celestials who came from another planetary system after having attained knowledge of "the essence of reality" by their own means?

This brings us to the whole problem of "first causes": chance or revelation? It is a problem that has so far remained insoluble, but we are on the verge of solving it by a kind of forward retreat. No astrophysicist or mathematician seriously considers the idea that interstellar travel will be achieved by "pragmatic tinkering"; it will remain beyond our reach until we at least have a mathematical representation of the "unified field" from which all the matter in the universe comes.

All this has the defect of being abstract, like the conviction of Cabalists (see Chapter 6) that "man will renew the acts related at the beginning of Genesis."

Let us try to make those notions concrete and "imaginable."

The moon is one and a half light-seconds away from Earth. Venus is a few light-minutes away. Going from

the Earth-moon stage to the Earth-Venus (or moon-Venus) stage will require only technological progress on the order of the transition from early muskets to modern machine guns. Man will eventually succeed in doing it, without going beyond the "pragmatic tinkering" of the Earth-moon stage.

But passing from travel to other planets in our solar system to travel to other planetary systems presupposes a change in the nature of knowledge of the kind involved in transition from the bow and arrow to the thermonuclear bomb.

Our present space technology deals with speeds on the order of fifteen kilometers per second; at 150,000 kilometers per second (half the speed of light and ten thousand times the speed of our rockets), it would take twenty years to reach the nearest possible planetary system, if the universe is as it is depicted by equations describing "non-unified fields."

The idea of astronauts traveling a distance of ten light-years without aging twenty years (or even ten) represents a "change of nature" for our science.

But the slightest certain evidence of other astronauts having landed on the moon before our time would demonstrate the reality of "my" Celestials and therefore prove that such a "change of nature" is possible for beings in our image.

On what does François Le Lionnais base his belief that such a "change of nature" would be no more "supernatural" than the "change of nature" that made a piece of pitchblende pass from the state of being a projectile thrown by a primitive man to the state of being the ore from which uranium for atomic bombs is extracted? Surely not on the Cabalists' statement that man will renew the acts related at the beginning of Genesis, or the doctrines of the twelfth century visionary Meister Eckhart, who drew from the Biblical

text the certainty that a "change of nature" was promised to men and that they were destined to "become gods."

It is much more likely that François Le Lionnais bases his belief on Einstein's work and ideas. In language comprehensible to everyone, Lincoln Barnett's small book *The Universe and Dr. Einstein* (with a laudatory foreword by Einstein himself) enables the layman to grasp what is involved. On p. 14 Barnett writes, "Modern physicists who prefer to solve their problems without recourse to God (although this seems to become more difficult all the time) emphasize that nature mysteriously operates on mathematical principles. It is the mathematical orthodoxy of the universe that enables theorists like Einstein to predict and discover natural laws simply by the solution of equations."

The Cabalist Safran's "God" is becoming more and more like Einstein's "mathematical orthodoxy," and less and less like the Sunday-school God, a bearded man attentive to devout prayers.

Mathematical orthodoxy assumes that in the foreseeable future a mathematician will succeed in putting into equations the "unified field" whose existence Einstein regarded as certain. When that progress in mathematical language has been achieved, we will be able to understand the "contraction of time," which has so far given rise to more paradoxes than conclusive data.

Can a distance of ten light-years be crossed "rapidly," that is, without costing an astronaut ten to twenty years of his life?

In the present state of things, whether you answer that question yes or no, you can be sure that a mathematician or a physicist who favors the opposite theory will state a paradox which amounts to

demonstrating that even if he is not right, you are wrong. With regard to the theoretical possibility or impossibility of "reaching the stars," we are in a situation comparable to the one in which Zeno's paradox, five centuries before Christ, placed those who discussed the *theoretical* possibility that a man could catch a tortoise by running after it.

Zeno's paradox of Achilles and the tortoise can be stated as follows. Let us assume that Achilles can run ten times as fast as the tortoise and is a hundred feet behind it. He runs the hundred feet, but the tortoise has by then had time to move ten feet from its starting point; when Achilles has run the ten feet, the tortoise has moved forward one foot; one foot for Achilles, a tenth of a foot for the tortoise; and so on forever. Achilles will always be separated from the tortoise by a distance equal to a tenth of the distance he covered in the previous stage, and *theoretically* he will never catch up.

It was not until the seventeenth century that mathematics had progressed to the point of being able to demonstrate *in theory* the "mathematical unorthodoxy" on which Zeno's paradox rests. But *in practice* it was enough for anyone to catch a tortoise to demonstrate that Zeno's proposition was a paradox.

Today, some mathematicians maintain that *theoretically* it will *always* take a little more than ten years of aging for a man to cross a distance of ten light-years. Others maintain that *theoretically* this is by no means certain, because of a "contraction of space-time."

But *in practice* there are two ways to find out which of these two views is based on a new version of Zeno's paradox: by succeeding in putting into equations the "unified field" in which time (which is a "field" to be unified with the others) is not subject to paradoxes; and by finding on the moon any kind of evidence, even a

shirt button, which proves *experimentally* that "reaching the stars" is a "change of nature" no more supernatural, for a human race that has thus equaled the "gods," than my hypothesis says it is.

In the present state of things, exploration of the moon seems nearer than putting the "unified field" into equations. But even if I have succeeded in persuading you that the concrete reality of "my" Celestials is plausible, I have not yet offered much to justify my conviction that those Celestials left a message for us on the moon, and not on Mars or Venus or anywhere else. So far I have reasoned on the basis of a simple syllogism:

The Celestials in the protohistoric Myth are described as being "in our image"; astrophysicists now envisage building a base on the moon; therefore the Celestials in our image used the moon, and evidence of their presence there is waiting to be discovered.

That is a short justification for a proposal as disconcerting as the concrete reality of Celestials who *theoretically* know how to "reach the stars," as *in practice* Achilles was able to catch the tortoise.

We will now examine it more closely.

CHAPTER 11

The Moon

Scientists constitute a category of people whom it would not be serious to take seriously. They spend their time concocting hypotheses whose experimental verification is exorbitantly expensive, because all that really interests them is putting into equations our childhood dreams: the moon, Mars, Venus, the stars. And when they are told that their hypotheses are "wild," they answer like Dmitri Mendeleev: "It is better to work on the basis of a hypothesis that may eventually be disproved than to work with no hypothesis at all."

Mendeleev was a Russian chemist, born in 1834, who did not believe in Pure Chance and wondered what would happen if the chemical elements were classified according to their atomic weights. He tried it and found that this classification showed a "periodicity in the properties of the elements."

That "periodicity in the properties of the elements" might seem as arbitrary as the rules of a children's game, but as the "periodicity" of Mendeleev's hypothesis says, "You're it!" to each of the elements, which were previously piled up in disorder, they arrange themselves in neat columns.

Mendeleev died in 1907. Today, all the "models"

by means of which scientists working before 1950 tried to give a "representation of reality" have become museum pieces—except for Mendeleev's periodic table, which has survived in the same way as Carnot's principle. It has been found, in fact, that it enables us to arrange in "periodic columns" *all* the elements of the universe, even those whose radioactivity has made them disappear from our planet.

How was Mendeleev able to build such a durable and "prophetic" model?

There have been many studies devoted to Mendeleev. Each of them proposes its own explanation. The explanations are attractive and would even be convincing if they did not contradict each other, which means that each of them is destroyed by another. When we have finished reading them, we are left with only two certainties: first, Mendeleev did not believe in Pure Chance, but in a kind of mathematical orthodoxy; and second, he preferred to adopt a hypothesis that might be disproved, rather than having no hypothesis at all.

Scientists like Mendeleev spend their time building new hypotheses. And when their hypotheses are confirmed we see that they confirm our childhood dreams, in both the "telescopic" and the "microscopic" realms.

Children's imagination is highly overrated. Children's dreams are only structures whose building blocks are legends like the ones Mendeleev's nurse told him in his boyhood. And nurses' legends, which scientists like Mendeleev spend their lives trying to verify, all come from the Myth shared by the First Civilizations: Celestials came from the sky and lived on the Earth; they had power great enough to move mountains but small enough to fit into a thimble; the moon is a sacred body because the Celestials went to it and returned from it. . . .

When Herschel discovered a new planet, it was at first given his name; then there was a gradual return to the terminology of the Myth and the planet Herschel is now called Uranus. And the planet whose existence was calculated by Leverrier has finally come to be called Neptune, in accordance with the wishes of astrologers—which seems almost too whimsical to be true.

But why are scientists taken so seriously when their imagination has remained so childish? A good part of the respect they arouse in simple souls comes from positivistic professors who solemnly pontificate, make hardly any discoveries and maintain that imagination should be avoided like the plague. In 1922 thirty of those pundits, members of the French National Institute, decreed that Einstein was a wild-eyed visionary and therefore refused to let him come and give a lecture on "his" relativity. Several equally serious members of the same Institute demonstrated in the nineteenth century that a heavier-than-air machine could never fly. Another nineteenth-century member even proclaimed that the idea of trying to have running water higher than the fourth floor of a building was absurd because the pumps would constantly be failing.

I would like to express my gratitude to this last mentioned man (whose name escapes me) because, thanks to him, I can propose my hypothesis without mistaking myself for Einstein: I have only to consider myself equal to a plumber who installs a shower in a fifth-floor apartment.

My hypothesis is that Pure Chance, which is already discredited by the coherences of the Biblical text, is also inadequate to explain why the moon is what it is.

The moon has what is called synchronous rotation, which means that it makes one complete turn on its own axis in exactly the same time it takes to make one

complete revolution around the Earth. If the Earth had synchronous rotation, one of its hemispheres would always be facing the sun and the other would always be in darkness.

The synchronous rotation of one heavenly body around another does not contradict any of the laws of celestial mechanics, but it is so improbable that astronomers have always sought a better, more convincing explanation for the moon's synchronous rotation.

They began by saying that the moon's center of gravity was eccentric (off center). If you give a ping-pong ball an eccentric center of gravity by weighting one side of it with a piece of lead, then put it in a sling and whirl it around, it will take on synchronous rotation: it will always present the same side to you the one opposite the lead weight, which will stay on the outside of the orbit described by the sling.

Experience has disproved the theory of an eccentric center of gravity: if the moon's center of gravity did not coincide with its geometric center, satellites would describe erratic orbits around it (heart-shaped ones, for example).

The theory of an eccentric center of gravity was based on the assumption that the moon was a mass of already solidified matter when it was caught by the Earth's gravity and turned into a satellite. Now that this theory has been disproved, there is still another explanation, accepted in its main outlines by most astrophysicists: tides raised on the moon by the Earth's gravity slowed and finally synchronized its rotation. (The tides that the moon's gravity causes in our oceans have a braking effect on the Earth's rotation, but since the moon's mass is so much smaller than the Earth's, that effect is almost imperceptible.)

This hypothesis assumes that the Earth and the moon

were solidified almost simultaneously from initial gaseous cores during the "liquid stage," since the moon has never had masses of water that tides could have raised. A logical corollary of this assumption would be that the Earth and the moon have similar compositions and therefore have about the same density. That is not true, however: the moon's volume is 2 percent of the Earth's, but its mass is only 1.2 percent.

I am not the first, of course, to point out that gap between theory and experimental data. Auxiliary theories have been formulated to fill in the gap, and I have no basis for disputing them. I can only sum up the situation: the moon's synchronous rotation is a baffling enigma for scientists; there are a thousand explanations for that enigma, that is, 999 too many; provided it is seen only as a working hypothesis, the explanation I am proposing can become number 1001.

At this point a moment of carelessness can make my hypothesis veer off into science fiction. There would be nothing super*natural* about a deliberate braking of the moon's rotation, carried out by thinking beings, but an astrophysicist has taken the trouble to calculate the energy that would be required for such an operation: "Using plasma cannons, or perhaps the pressure of radiation, [...] the amount of deuterium that would have to be used is ten times greater than all of the Earth's reserves of deuterium."

The operation is therefore as super*human* as it is rationally conceivable in theory.

But it is the *totality* of my hypothesis that is superhuman. The energy necessary for "stabilizing" the moon is beyond human capabilities, and so is the energy necessary for interstellar travel.

It is only because "no scientist has concluded that interstellar travel is impossible" that I can propose a teaching from the sky as a solution to the enigma of our

ancestors' astronomical knowledge.

(If it exists, that teaching may give our advanced scientists the solution to a problem they have already succeeded in formulating: that of quarks, the name given to the particles that constitute the proton. The existence of quarks is still theoretical and will remain so a long time if discovery of the teaching from the sky envisaged in my hypothesis does not give a hand to human research: the proton is not expected to be "cracked" before the year 2000. The "quark theory" is solid, and releasing the energy of quarks may conceivably supply the "superhuman" energy of my hypothesis.)

My hypothesis states that the Celestials arrived in our solar system between 22,000 and 21,000 B.C. and that of all the planets in the system they decided that Earth had the best possibilities for being inhabited by them. But because of the Würm III glaciation (whose probable mechanism is described in Part Two of this book), Earth was enveloped in opaque clouds. Even with "superhuman" means, dissipating those clouds and then making Earth inhabitable (we will examine this in Part Three) was a long-range undertaking. To carry it out, the moon could be used as an observatory, a laboratory and a launching platform, on one condition: it had to be "stabilized" in such a way that it would always present the same side to Earth; an underground base could then be made on that side, from which operations could be watched and directed.

For some time now, the Soviet press has been "taking an option" on the concrete reality of astronauts who lived on Earth thousands of years ago. It is quite conceivable, of course, that such astronauts would have had no need of a launching platform on the moon, but considering the existence of a spaceport there seems logical as soon as we have accepted the hypothesis of

Celestials in our image who lived on Earth.

A French scientist has told me that Soviet scientists deplore the "American-style sensationalism" of the Russian press that publishes articles on those astronauts from "elsewhere." I must therefore specify which articles I am referring to, and why.

In January, 1967, *Tekhnika Molodiezhy* published an article by Kasantzev in which he "demonstrates" the reality of astronauts who left "calling cards" on Earth. He bases his argument on allegations as indefensible as those used by French neo-obscurantist publications, but the article (which Russian scientists can rightly call deplorable) was preceded by a "presentation of the editorial committee" in which we read that "the question of whether or not beings from other planets have come to Earth remains open."

Would the editorial committee of a Soviet magazine, whose purpose is to fashion the minds of Soviet youth, have ventured to write that, under a heading that personally committed its members to the view involved, without at least the tacit agreement of highly placed Russian scientists? It is good to recall here that condemning a poet or simply preventing him from publishing, if it is felt that he would pervert the minds of youth, is a common practice in the Soviet Union.

A characteristic article was reproduced in the first issue of *Sputnik* (June, 1967), which presents itself as a "monthly digest of the best articles published in the USSR." The author of the "digested" article states that "astronauts made a stay on Earth twelve thousand years ago." His arguments and alleged facts are as indefensible as Kasantzev's. But. . . .

But the author in question is an assistant research director of the Soviet Academy of Science and his article was originally published in the magazine *Science and Religion,* whose function is to struggle

against "religious superstitions" and not to propagate foolish superstitions. And this is undoubtedly the key to the apparent contradiction between the cautious position of Soviet scientists and the freedom left to the imagination of journalists.

The Soviet press is "taking an option" that prepares public opinion to greet the discovery of evidence for the presence of "Celestials" on the moon with cries of "Popov said so, and before anyone else!"

Serious Russian scientists deplore the excesses of articles that they rightly consider indefensible.

If the option turns out to be justified, the excesses will be forgotten and it can be pointed out that the Soviet press gave serious consideration to the reality of "visitors from space" as early as 1967.

Russian thought processes are simple and obvious only to Russians. Atheistic heirs of the Byzantine theologians, the Soviets have had childhood dreams nourished by legends in which the idea that angels once lived among men is accepted as a matter of course. I am Russian; my nurse never doubted the concrete reality of the angels in the Bible.

It may be, of course, that I am mistaken. But if I am not, some day all radio and television stations will interrupt their programs to announce that proof of astronauts who preceded man on the moon has been discovered.

There will be no problem for the Soviets: their press has already taken an option on the hypothesis. And they will have a fine chance to denounce "the fundamental error of Christianity, which has always denied the concrete reality of the 'gods.' "

No problem for Cabalists, either: they have never translated "Elohim" as "God." For Jews, it is "Yahweh" that is the "Ineffable Name" of the "Immaterial Principle." And for more than thirty-five

hundred years they have been waiting for the "coming of the Messiah" to be attested by elucidation of those passages in Genesis which, until that coming, must remain "ineffable for men."

For others, I do not know. You, for example. . . . If there can no longer be any doubt about the scientific validity of the Biblical text or the fact that the plural "Elohim" does not designate a "God," but astronauts who died long ago, will you simply say, "Oh, really?" or will it pose problems for you?

We have not yet reached that point. The attitude I am attributing to Cabalists and the Soviets is only my personal opinion. For my part, I arrive at this syllogism:

If my hypothesis is confirmed, it will be the only one which predicted by theory that traces of the Celestials were waiting for us on the moon; that theory is based on the Biblical text; therefore confirmation of my hypothesis will at the same time confirm my initial postulate that the Biblical text is the most solid document we have concerning the origin of our civilization.

After reading this book in manuscript, "literary" people asked me, "Why the moon rather than Mars or Venus? And why that launching platform?"

I do not know why the moon was chosen rather than Mars or Venus. I know only that so far nothing not in conformity with the natural order of things has been detected on Mars or Venus, whereas the moon's synchronous rotation can be rationally explained only on the hypothesis that its rotation was deliberately stabilized by thinking beings.

Because of the phenomenon known as libration, the area of the moon that can be seen from Earth is 59 percent of its total area. The most recent photographs show the same 59 percent as maps of the moon drawn at

the beginning of the seventeenth century by means of Galileo's early telescopes. Since the moon revolves around the Earth thirteen times a year, we know that its synchronous rotation has not changed perceptibly in more than four thousand rotations and revolutions. Such precision is highly improbable (though not impossible) in the natural order of things.

Astronomers know all this, of course. Why do they not say anything about it? What could they be expected to say? That the explanation of the moon's synchronous rotation by an eccentric center of gravity has been disproved by facts, that we no longer have a certain explanation for it, and that one more enigma has been added to the long list of those waiting for a solution? If you ask them about this, they will confirm it; if you ask them nothing, they are unlikely to call you up and tell you that an explanation which was satisfactory a few years ago is now outmoded, but that they do not yet have another one to offer you.

Excuse me for insisting, but any scientist acquainted with astronomy will tell you that the moon's synchronous rotation is an enigma and that explanations which were satisfactory a few years ago are not satisfactory now.

Four thousand rotations and revolutions is a figure that strikes the imagination, an astronomer said to me, but only three hundred and fifty years have gone by since Galileo, and that is nothing on the scale of the cosmos.

He is obviously right. But in three hundred and fifty years of rotating within our galaxy, the solar system has moved through an angle of five degrees, as we will see in Part Two.

CHAPTER 12

The Heavenly Jerusalem

If I had appeared in the sixteenth century with the techniques of predicting the future that are available today, I would not have been given time to say the Lord's Prayer before being sent up to heaven in smoke.

The future is not predicted by organizations that calculate to within half a percentage point the opinions you will profess on foreign policy next week, the color you will prefer for your shoes in six months, and the level that technology will have attained by 1984.

Have we already reached the limits of our predicting techniques? Is it permissible to imagine progress that will enable our descendants to land on another planet and set up a plan intended to make its inhabitants develop from the Stone Age to space travel in several thousand years? Though they do not pose the problem in the same terms I do, Cabalists have never doubted that the Bible contains, among other teachings, a plan on that level which is called "prophetism."

"Prophetism" is a word that my typewriter rebels against as much as it does against "revelation." Even so, let us see what kind of prophetism is involved.

In 1964 Schvili, a Cabalist of Russian ancestry,

published in Jerusalem his *Book of the Numbers of Deliverance, According to the Book of Daniel and the Teaching of Gaon of Vilna and Ari of Safed,* a work in which he "calculated" the deliverance of Jerusalem for the year 5728 of the Jewish calendar, that is, the year between October, 1967, and October, 1968. Ari of Safed lived in the sixteenth century (1534-1572), Gaon of Vilna in the eighteenth (1720-1792); their teachings were put into writing and can therefore be dated with certainty, just as Schvili's book has the certain date of 1964, three years before the Six-Day War.

Does the Bible contain a "scientific forecast" on the scale of centuries? Does its interpretation by Cabalists enable them to make predictions whose accuracy runs counter to everything without balking? I began by balking, by wondering if the prediction confirmed by events was being exhibited while those that had been disproved were hidden.

Here as elsewhere, certainties are essentially elusive: no one can claim to have read and remembered *all* the interpretations of Cabalists and to have concluded (with no possibility of verification by anyone else) that *none* of them set the date for the deliverance of Jerusalem at 1842, 1875, 1908 or 1972. The only certainty is that Schvili published that prediction and no other, and that no other Cabalist of equivalent reputation has published a prediction setting the date for the deliverance of Jerusalem in another year.

Should we brush all that aside and approach the problem from the opposite direction, by assuming that the extremely realistic leaders of Israel carried out a major action based on interpretation of sixteenth century texts? That would almost be more disturbing.

Is there still the possibility of turning to Pure Chance again?

The Biblical text and its interpretation by Cabalists

being what they are, Pure Chance is beginning to look more preoccupied than the monkey that Emile Borel put to work typing the *Aeneid,* now that it is being asked to endorse the work of a whole university faculty of monkeys hanging by their tails so that they can type faster, with one typewriter for their hands and another for their feet.

It can now be said that invoking Pure Chance is no longer the act of a rational mind. It is turning into a positivistic superstition: a Pure Chance that can accomplish all that is no longer compatible with the mathematical orthodoxy which made Einstein say that "God does not play dice."

Does this mean that my hypothesis and "my" Celestials are the right answer, the only possible answer, *the* answer?

I have never said any such thing. What I do say is that in the present state of things, pending further knowledge, my hypothesis of Celestials who behaved as the Bible says they did, and who "calculated" the future course of human development, appears to be the most *rational* of all hypotheses on the origin of our civilization.

Like all esoteric research, study of the Cabala has had its share of visionaries. But two points should be stressed:

1. All Cabalists who have prophesied nonsensically have been rapidly discredited by the failure of their short-range predictions.

2. Cabalists regarded as great, those whose works are now published in Jerusalem, have never been contradicted by events.

Those Cabalistic works have been published continuously in Jerusalem since 1948 because that is what Gaon of Vilna said should be done. "If you have understood what you have just read, tell no one," he

wrote in the eighteenth century; but he added that *all* texts which were to be kept secret till the beginning of "Messianic times" should be published as soon as those "times" arrived, and he fixed the date of their arrival in 1948, which was the year when the withdrawal of British troops from Palestine gave birth to the State of Israel.

For Cabalists, "Messianic times" are "times of revelation," which in Greek is "times of apocalypse."

To conclude with one more curious correlation, I will point out that the Law of Moses decrees 613 obligations and prohibitions, which all Jews are expected to observe. One of them states that "no cutting edge shall touch the skin of your cheeks," which accounts for the bushy beards worn by pious Jews until recent years. Now, with the electric razor, in which a grill separates the cutting edge from the skin, shaving has become lawful.

Such respect for the letter of the Law is chilling, but it must be realized in order to understand what follows.

The most important and absolute of the obligations decreed by the Law of Moses is respect for the Sabbath. Each seventh day is sacred, and subject to rites so rigorous that it would be inconceivable to prolong them beyond twenty-four hours. A serious problem now arises for a pious Jew: how can a Jew respect the Sabbath if he is an astronaut on the moon, where "a day" lasts for fourteen Earthly days?

The answer is found in texts that can be dated with certainty as having been written several centuries ago: respect for the Sabbath is an obligation only so long as the "kingdom of heaven" is on the Earth.

Does this mean that it was foreseen that man would reach the moon and that his arrival there would coincide with the beginning of "Messianic times?" Does it mean that it is not a bottle or a stainless steel bolt which

is waiting for us on the moon, but the "message of the covenant" whose discovery will make the moon the "Heavenly Jerusalem" about which we know nothing except that it is part of the promises made by the Celestials? Does it mean that the Earthly Jerusalem *had* to be reconquered before the Heavenly Jerusalem could appear? It is the Cabala itself that calls me back to order: "The Cabala does not conceive sudden 'illuminations' that make reason useless," writes Alexandre Safran.

All the data in this book have been checked as closely to their sources as possible. All lines of reasoning based on those data have been submitted to the most highly qualified criticism I could find. But errors are still possible and I ask the reader to let me know about any that he may find.

I thank Professor Leroi-Gourhan for pointing out to me that because I relied on outdated documentation my reasoning (in *Les dieux nous sont nés)* with regard to the Lascaux cave paintings was false, since I assumed that they dated from about 21,000 B.C., whereas they actually date from about 15,000 B.C. I attempted to prove too much. Excuse me; I will try not to do it again.

I thank Léon Askenazi for having led me to see the error of judgment that made me minimize, in *Les cahiers de cours de Moïse,* the responsibility of the Church of Byzantium in the floundering from which Islam arose. I thank him even more for having assured me—without, of course, taking responsibility for my books that my hypothesis is compatible with the Cabalistic tradition.

I thank Professor Evry Schatzman, who had already made me realize that I had placed my trust in dubious data with regard to "Lilith" (*Les cahiers de cours de*

Moïse), for reading this book in manuscript. It is to him that I owe the calculations in Chapter 11 concerning the energy necessary for the alleged stabilization of the moon, which means that in *Les dieux nous sont nés* I grossly overestimated the possibilities of the use of hydrogen bombs in astrophysics.

Facts have shown me that the names under which the popes have reigned do not necessarily obey the rule I thought I had determined in *Les cahiers de cours de Moïse.*

It would be amazing if I had not made still other mistakes, but it is nevertheless true that all the errors which have so far come to my attention, whether discovered by friends, non-friends or myself, concern only assertions whose disproof leaves the main outlines of my hypothesis intact.

I owe a sampling of those errors to Hilaire Cuny, who not only consented to read this book in manuscript, but also pointed out errors and inadequately grounded statements in it.

One of his objections—which I did not take into account in revising the manuscript—concerns the *biological* identity that might have enabled "my" Celestials to impregnate "the daughters of men." Does life originate in the form of an initial cell that is always identical wherever it appears in combination with a carbonic base? It is plausible but undemonstrated. Does the natural evolution of that initial cell necessarily lead to a form similar to ours, wherever there is the appearance of an intelligence inclined toward "cosmic preoccupations?" That too is plausible, but "similar" does not mean "identical to the point of involving chromosomal compatibility."

I did not take the objection into account because:

(a) I do not assert that things happened in that way.

(b) I have no right to make omissions or alterations in

the texts on which I base my hypothesis, and in them I read that "the sons of the gods" impregnated "the daughters of men."

But I obviously cannot pass over the objection in silence because:

(a) It is rational, and touches on an essential point.

(b) It would be falling into science fiction to attribute such a chromosomal identity to some sort of undemonstrated "biological orthodoxy."

(c) The objection gives me a chance to emphasize the difference between the texts I quote from and the reasoning I base on them.

(d) Hilaire Cuny may be in agreement with the Biblical text: Enoch (Genesis 5:21-24) *may* have been an exceptional human being whom the Elohim considered as their "(adopted) son," and for whom impregnating "daughters of men" would have posed no problem.

To avoid any unwarranted use of Hilaire Cuny's name, I will point out that he gives me "no more than one chance in ten thousand of being right." But when he told me that Schliemann and I suggested to him that "perhaps the Bible. . . ." I felt I had achieved my goal.

What follows is addressed only to those interested in interpretation of the *Tao Te Ching,* in which Lao-tse says that "darkening darkness is the door to all wonders."

In his preface to a translation of the *Tao Te Ching,* Etiemble uses as an epigraph the interpretation I suggested, in *Les cahiers de cours de Moïse,* for the Chinese ideogram designating the Tao. It is supported by the interpretation of a scholar whom Etiemble unsympathetically calls "Stanislas Julien's predecessor

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in the Collège de France,'' and who also postulated, with a competence far greater than mine, a correlation between the Chinese myth and the Biblical text.

In a P.S. to his preface, Etiemble refutes my interpretation, opposing it with that of the German Sinologist Forke, which he also refutes, thus superbly ''darkening darkness.'' Refuted by an interpretation that is itself refuted, is my interpretation confirmed (as a minus times a minus equals a plus) or rejected (as a minus plus a minus equals a minus)? I leave it to the pundits to decide.

I have only one complaint to make against Etiemble: he pretends to forget that the ''spaceship from the sky'' which I discuss is not some flying saucer that flew out of my imagination, but a feature of the common Myth. The Chinese name for the ''Vessel of the Celestials'' escapes me; in the Bible it is called Ezekiel's chariot.

Was Stanislas Julien's predecessor in the Collège de France wrong? Within the lifetime of most of us the moon will have been explored and we will know if it is now reasonable to estimate the chances of space travel that will make human beings appear as ''gods'' when they land on a planet where primates endowed with reason and speech do not ask themselves all these questions.

PART TWO

The reader who has followed me this far is perfectly entitled not to know what the invention of agriculture meant to mankind, and to have no precise idea of the methods that have enabled archaeologists to date that revolution; nor is he supposed to know the mechanism of the great glaciations and the phenomenon of the precession of the equinoxes, or Confucius' opinion on the importance of defining terms precisely.

If you know all that, you can blithely skip over Part Two and go on to Part Three.

The Appearance of Agriculture

Until Boucher de Perthes (1788-1868) and Darwin (1809-1882), prehistory was simply what the etymology of the word implies: the period before known history. It was considered to be a very brief period, since there was no reason to question the idea that man had appeared fully formed—by God according to believers, by nature according to others. The version of evolution put forward by Lamarck (1744-1829) scarcely went beyond the assertion that Africans had turned black to protect themselves from the sun.

It went without saying that as soon as man appeared he used tools, built houses and "naturally" adopted human behavior. The opinions professed by the Encyclopedists are instructive: setting the appearance of the "first man" ten thousand years before the Abraham of the Bible was a daring opinion because it had no arguments to oppose to those who situated the creation of man by God at about 5000 B.C.

In the nineteenth century came a revelation destined to be confirmed and deepened by the methods of the twentieth century: man is the product of slow evolution; he was already approaching the notion of metaphysics in the Paleolithic period, when he underwent the cataclysm of the Würm III glaciation (which we will examine in the next chapter); and it is

shortly after that cataclysm that the Myth which arose in protohistoric times situates the arrival of "civilizing Celestials."

The nineteenth century also had the revelation of the sacred books of the Orient. As the exact sciences progressed and knowledge of protohistory increased, the nineteenth century was struck by the correlation between Oriental myths and the discoveries of Western science. But for the nineteenth century, space travel was a crackpot notion and the only reasonable explanation of those correlations lay in a "lost civilization" that flourished "long ago," about which one could say almost anything without risk of being proved wrong.

The time is past when anyone could say anything that came into his mind: the methods of modern archaeology have established solid data, and it is only in order to propose an overall coherence for prehistory that we still deal in hypotheses. What has recently been established about the appearance of agriculture provides a good example of both the results obtained and the methods used.

The first human communities that began to approach a sedentary existence had a "squirrel economy," known as a food-gathering economy. They gathered wild grain in the proper season and stored it for the rest of the year. Hunting brought additional food that had to be eaten immediately. Herding had not yet been invented.

Between a wild grain plant and its cultivated descendant there are two essential differences: the stem of the grain and its husk. The wild grain must be attached to the spike by a stem brittle enough to be broken by the wind, and its husk must be sturdy enough not to rot between the time of "harvest by the wind" and the time of normal germination. A wild plant whose grain stems are too strong is doomed to dis-

appear: grains that have not been eaten by birds will rot on the spike, not having been scattered by the wind. Grains that have been scattered by the wind will rot if their husks are too light to withstand several months in the ground.

Wild grain plants are well equipped for natural survival, but they are the opposite of their cultivated varieties: the farmer *wants* a strong grain stem that will resist wind and harvesting, and he *does not want* a husk strong enough to make the grain hard to thresh. He is not forced, like nature, to harvest and sow on the same day.

At Jarmo, in what is now Iraq, discovery of an evolution from wild grain to cultivated grain has made it possible to determine that the first known agricultural economy, replacing an older food-gathering economy, appeared in about 8000 B.C. And the methods that enabled archaeologists to make that determination have permanently discredited those who think they can still say whatever comes into their minds without risk of being proved wrong.

Archaeologists begin by systematically prospecting a region where legends (again!) situate a settlement that goes back into "the depths of time." When they have found what seems to be a plausible location, they probe, then excavate. They begin their archaeological work, in the strict sense of the term, when they have established that several dozen tons of debris, taken from a depth of several yards, deserve to be "put through the strainer." Each layer of sediment (a scholarly term for debris) is dated by the carbon 14 method, which makes it possible to assign an age to each pottery fragment and bone splinter—and even grains of wheat more than ten thousand years old.

It was in this way that the lives of the communities that succeeded one another at Jarmo were recon-

structed. To separate wild wheat from its sturdy husk; it had to be heated on a sieve held over a fire; a few grains fell through, and by means of the "strainer method" some of them were found among the tons of debris in the oldest layers. And grains found in increasingly recent layers had increasingly thin husks.

Harvesting wild wheat at Jarmo must have been done by a method similar to that by which wild rice is harvested in America: cloths are spread out to catch the grain, the stalks are shaken (as the wind would do), the fragile stems break and the grain falls. The grain that escapes from the harvesters is enough to guarantee the reproduction of the plants. But this is an extremely hazardous method: the harvesters must take the grain at the exact time when it is ready, and if the wind blows it off before they can harvest it, they are doomed to a year of famine.

The inhabitants of Jarmo had inventive minds. In layers dating from 8000 B.C., archaeologists have found flint chips which, according to various indications, seem to have been mounted on wooden handles to form primitive sickles. They still have the siliceous coating that characterizes tools which have been used for cutting stalks.

But a flint sickle shakes a stalk much more than the wind does. Does this mean that the inhabitants of Jarmo had succeeded, by a reasoned selection of seeds, in making their wild wheat, with thin stems and thick husks, evolve artificially into cultivated wheat with thick stems and thin husks?

Archaeology, having freed itself of nineteenth-century reveries and become a rigorous science, situates the appearance of the first human civilization in about 8000 B.C. at Jarmo and also at Jericho, where (Pure Chance again?) Moses's chosen people sought "a secret."

From here on we enter the realm of hypothesis, looking for the overall coherence in which the invention of agriculture is included. Was the technique of selecting seeds discovered like the technique of mounting flint chips on a wooden handle, that is, by a natural progress of the human mind? That is one hypothesis among others: the hypothesis of "my" Celestials, the hypothesis of a "lost human civilization," and the hypothesis of the Voice of God transformed into an agronomist (which is rationally unacceptable and therefore excluded from this book).

But the same methods that enable us to assign a date of about 8000 B.C. to the "innovation explosion" constituted by the discovery of agriculture rule out the hypothesis of a teaching inherited from "a lost Earthly human civilization." Archaeologists are now finding, identifying and dating grains ten thousand years old; there is no chance that they might have overlooked some older but more durable object giving evidence of an earlier civilization, if such a civilization ever existed.

It is possible, of course, that a civilization of purely Earthly origin may have existed in very remote times, a hundred thousand or even half a million years ago; but if archaeologists have found no trace of it, how could the inhabitants of Jarmo (who did not know how to read) have found a teaching on the selection of seeds? We are left with two alternatives: either the inhabitants of Jarmo discovered the selection of seeds without help from anything but Pure Chance, or agriculture was taught to them by the offspring of Celestials and human women, as is stated by the Myth common to all the civilizations that appeared fully formed in Neolithic times.

In this connection it is good to recall the myth of corn, which the American Indians regarded as a "gift

from the Celestials." Corn is a typical cultivated grain plant: grains strongly attached to the ear, husk very easy to remove. Left to itself, a field of corn is doomed to disappear: grains that are not eaten by birds will rot on the ear. There is no wild corn, and no one has ever found a plant that could be considered the "wild ancestor" of corn. Botanists have tried in all sorts of ways to make modern corn return to a wild state; they have made it degenerate, but they have never succeeded in obtaining a wild plant, that is, one capable of reproducing itself without the aid of a farmer.

There is wild wheat, and cultivated wheat easily returns to its wild state; no legend presents wheat or rice as a "gift of the gods." In civilizations of wheat and rice, the "gods" only taught agriculture.

Corn persists in confirming *its* myth of Celestials who brought a plant that does not exist on our planet in a wild state. Wheat and rice persist in confirming *their* myth of Celestials who taught the art of transforming a wild Earthly plant into a cultivated plant.

A view put forward in another area seems incompatible with the idea that agriculture was created by the human mind. Robert Graves (*The Greek Myths*) and the ethnologists on whose work he bases his opinion have reached the conclusion that in about 10,000 B.C. matriarchy was the rule in human communities. Human beings had not yet discovered the connection between the sex act and the impregnation of women; in this respect they were on the same level as other mammals, but they had a "metaphysical spirit" that placed them above other mammals and made them worship the Mother Goddess. They believed that the Mother Goddess gave proof of her reality by bringing about reproduction of the species through women, her legitimate priestesses.

This matriarchy is not an unquestionable fact

(especially when presented in such a linear fashion) but it is plausible and even probable. It is consistent with the intellectual level discernible in the people of twelve thousand years ago, whose "art" shows that they had degenerated with respect to the oldest known cave paintings. It is probable enough to justify asking a question:

If in 10,000 B.C. human beings had ideas of reproduction worthy of a gorilla, could they have progressed between 9000 and 8000 B.C. to the point of conceiving the principle of a selection of seeds which placed them far above the level of today's Amazonian primitives?

Anything is possible. Or, more exactly, it is quite possible to accept the view that human beings were ignorant of the connection between the sex act and the impregnation of women in 10,000 B.C. and it is quite possible to accept the view that human beings selected their seeds, without outside teaching, between 9000 and 8000 B.C.

I have met excellent ethnologists who justify one or the other of these views with excellent arguments. But (perhaps because I do not know you) I have never met an ethnologist who is acquainted with both the cult of the Mother Goddess and the appearance of agriculture, and who is thus willing to collate data from both disciplines, which seem to be separated by airtight partitions.

Which brings me to my main ambition, here and in the rest of the book: breaking airtight partitions.

Glaciations

"Recent" glaciations, those that occurred in the past hundred thousand years, are obviously the ones we know best. But what we know with certainty amounts to very little:

1. Glaciations affected the whole planet, unlike great foldings of strata, which are always highly localized phenomena.

2. At ground level, the internal heat flow of the globe is .003 percent of the heat received from the sun, which is therefore directly responsible for the great variations in the Earth's temperature.

Caused by the sun and affecting the whole planet, the cooling that brings on glaciations thus appears as a phenomenon affecting the entire solar system. This prompts us to take the reasoning one step farther. Did the sun cool because of a variation in its internal heat flow, or because the whole solar system passed through a galactic "field of cold?"

I use the term "field of cold" to stress the fact that we know practically nothing about the "fields" which maintain the solar system in our galaxy and give it motions of rotation on its own axis and revolution around the center of the galaxy. All we know is that those "fields" exist, otherwise we would not be here.

But insofar as a constant periodicity can be established for successive glaciations, a correlation seems plausible between cyclical coolings of the sun and a cycle of the same duration which affects the solar system within the galaxy. A few geologists, including Milankovitch (quoted by V. Romanovsky and A. Cailleux), suggest a correlation between a "glaciation cycle" and the 25,920 years in a cycle of the precession of the equinoxes (whose mechanism we will examine in the next chapter). The last great glaciation, known as the Würm III, occurred between 22,000 and 21,000 B.C.; a cycle of about 26,000 years would place the next one some time around the year 4500. And there are certain indications which do indeed give reason to think that in about 2,500 years there may be another glaciation reaching the level of the "great" ones.

We know little about the *causes* of the great glaciations, but we can form a more precise idea of their *effects*. The first sign that a great glaciation is approaching is that winters become longer and harsher, while summers become shorter and cooler. It is a very gradual phenomenon and its amplitude obviously goes far beyond weather variations perceptible in a human lifetime: it appears as a lowering of the average temperature from one century to the next.

In a century colder than the one before; glaciers increase in area and thickness. Less evaporated sea water falls as rain and returns to the sea by way of rivers; more of it falls as snow and is frozen on glaciers. Evaporation of the seas continues, however, since there is a "vapor tension" even on a frozen surface. (It is not its relative heat, but its specific lightness that makes vapor rise into the air; the weight of a molecule of H_2O is not compared with the weight of the atom O, but with that of the molecule O_2.)

Evaporation thus continually lowers the level of the

seas, first bringing about a change in the shape of the sea bottom, since it supports a smaller weight of water. Then comes a time when the downward pressure of water no longer counterbalances the upward pressure of lava, and cracks appear in the ocean floor. Lava with a temperature of hundreds or thousands of degrees comes into contact with the water, making it boil and suddenly accelerating evaporation. Thick clouds rise into the air.

But these undersea deformations and fissures affect dry land, whose convulsions amplify (by retroaction) the cracking process in the ocean floor, which in turn. . . . Hurricanes sweep over the whole planet, mingling clouds of dust with the clouds of hot vapor. The resulting dust-and-vapor clouds are opaque; they screen out still more of the sun's already reduced heat, and sunlight no longer reaches the ground. In a few dozen years, Earth takes on the appearance (seen from the cosmos) that Venus now has.

Beneath the cloud mantle, volcanic activity raises the air temperature until conditions are like those in a damp hothouse. Then a new equilibrium is established: the cracks in the Earth's crust are closed and, in the unending darkness, bitter cold sets in. Animals die; plant life is gradually reduced to lichens in the deep caves where a few human beings, members of a reasoning species, have been able to make shelters for themselves.

"The earth was without form and void, with darkness over the face of the abyss, and the spirit of God hovering over the surface of the waters." (Genesis 1:2.) "So God made the vault, and separated the water under the vault from the water above it." (Genesis 1:7.)

The beginning of Genesis seems to be describing our planet at the time of the Würm III glaciation. Everything is there, even man, who does not arise "from the

dust of the ground'' until after the Elohim have brought back sunlight, restored the cycle of rain and separated dry land from the sea.

In Part Three we will see how Genesis, read as if it means what it says, no more and no less, lends itself to a transcription in modern language which tells the logical, coherent story of the colonization of our remote ancestors by Celestials who later left after a semifailure, but still had time to fashion in man a *logic* in the image of their own. But before we get into those finishing touches we must first make sure that the story involved has a greater chance of reflecting historical truth than the product of an unbridled metaphysical imagination.

The sacred books and secular texts which describe the Myth that arose in protohistoric times are too numerous to be analyzed here, and even mentioning all of them would take up too much space. The main ones are the Indian *Mahabharata* (completely translated into English and partially into French), the *Gilgamesh Epic* (of which I know only ''poetic''—that is, approximate—translations), the *Tao Te Ching* and the surviving fragments of Manetho's *History of Egypt,* which I have never had the courage to read all the way to the end.

All these works are interesting to look through because no matter where you open them you will find either a confirmation of my hypothesis of Celestials or a ''poetic'' story that tallies with no identifiable reality; but you will *never* find anything that might contradict the hypothesis. And then there is Plato, especially in the *Timaeus* and the *Critias.*

Plato presents the *Critias* as an account of the knowledge that Solon brought back from his sojourn among the ''priests of Egypt,'' which makes it likely that Plato and the Biblical text drew on the same

sources. This identity of sources is, of course, only hypothetical, but it poses a dilemma: if the sources *are not* identical, the correlations confirm each other; if the sources *are* identical, the "complementary indications" take on a plausible value.

We must be very cautious with Plato, however; the Biblical text requires no "nudging" to make it agree with our most solid modern scientific data, whereas Plato's text requires a "double weighing," a "second-degree research."

In the *Timaeus,* for example, Plato speaks of a spherical world, eighteen centuries before Columbus. He supports this accurate conclusion with ludicrous arguments, which means that he did not reach the conclusion by himself, or even know those who reached it. It is therefore only the number of times he states accurate conclusions on the basis of absurd reasoning which enables us to rule out Pure Chance and leaves only the source claimed by Plato: a scientific heritage left by Celestials and later distorted by "poets."

Serious textual explication in a book becomes boring so quickly that I will not venture into it here. You therefore have a choice: either the method I have just described seems to you cautious enough to have given plausible results, and you take me at my word; or (and this is what I urge you to do) you go directly to Plato and verify that there are confirmations, complements and inconsistencies in his works, but never anything that contradicts my hypothesis.

Among the Pythagoreans there are constant references to a Great Year (*metacosmesis*) with a duration of 25,920 years: the same as that of a cycle ofthe precession of the equinoxes. Before going on to the next chapter, we can try to make correlations between

that Great Year and what we know about the possibility of a cyclical periodicity of glaciations.

The Great Year of the Pythagoreans is divided into twelve Great Months with a duration of 2,160 years each. Assuming that the Great Year began with the arrival of "my" Celestials during the Würm III glaciation (between 22,000 and 21,000 B.C.), the "seventh Month" began between 8500 and 8000 B.C., thus coinciding with the "innovation explosion" of the discovery of agriculture—and also with the discovery of agriculture and herding by Abel and Cain, that is, with the beginning of the "seventh day" in the Bible.

Does the "magic value" that the Myth attributes to the number 7 come simply from the fact that mankind began exploiting the "heritage of the Celestials" in the seventh Great Month of the Great Year? Did that "Celestial heritage" explain cyclical glaciations by stating that in every "twelfth Month" the rotation of the solar system brings it into a "field of cold" in the galaxy?

These are only hypotheses. What is certain is that the "heritage of the Celestials" claimed by the Pythagoreans involved knowledge of a 25,920-year cycle which "profane science" did not discover until twenty centuries after Pythagoras's death.

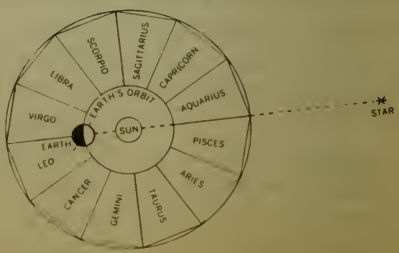
It is the cycle of the precession of the equinoxes.

The Precession of the Equinoxes

The Earth turning around the sun can be compared to a tub at the outer edge of a rotating disk: the tub rotates 365 times on its own axis in the time it takes the disk to rotate once.

Now place the solar-system disk and its tub in a larger tub at the outer edge of a larger disk. Still behaving as before, the solar-system disk is subjected, in its tub, to a rotation so slow that a single turn lasts as long as 25,920 turns of the Earth tub around the axis of the solar-system disk. Seen from the cosmos, the whole thing is as simple as the drawing below.

The astronomer's year begins in spring, on the day known as the equinox because night and day are then of equal duration. At the dawn of the equinox, the sun appears at a point in the sky called the vernal point (from the Latin *ver,* "spring").



On March 21, 1967, the astronomer's year began at the precise moment when the sun appeared at the end of a line of sight formed by any telescope aimed at a star (designated by the Hebrew letter Aleph in the drawing) on the eastern horizon. In 1968, when the Earth came back to the line of sight, a sidereal year had passed, marked by the return of the Earth to the prolongation of a line joining a star (*sidus* in Latin) and the sun. (Since 1968 was a leap year, March 21 "slipped back" to March 20.)

This year is divided into twelve months, *and here we must totally forget the errors propagated by astrologers.*

The "sun" of astrologers is "in Aries" from March 21 to April 20, but that is a *pure convention,* with *no* relation to reality. On March 21, 1967, the real sun, the sun observed by astronomers, rose on the Aquarius side of the intersection between Pisces and Aquarius. The astronomer's sun has, of course, sometimes risen in Aries, but the last time that happened was in the days of the Babylonian astronomer-astrologers. What has "displaced" it is the precession of the equinoxes.

The mechanism of the precession, as it appears to the astronomer, is easy to understand—provided you do not try to read the next three paragraphs too quickly. (But if you are not interested in theory, you can skip the three paragraphs.)

During the time that the Earth has taken to complete a revolution around the sun, the whole solar system has continued its slow rotation on its own axis (in its tub at the edge of the superdisk). The result, as it appears to an Earthly observer, is that in order to return to the line of sight at the end of which is the star Aleph (that is, to complete a sidereal year), the Earth must travel one revolution around the sun, *plus* the distance that the solar system has covered, in relation to the star Aleph,

in its rotation on its own axis. The equinoctial sun will therefore appear on the Earthly horizon *before* the end of the sidereal year: the annual return of the equinox *precedes* the end of the sidereal year, and that is the whole phenomenon of the precession.

It is a very slow phenomenon. Each year, the equinox precedes the end of the sidereal year by an amount which, expressed in degrees of angle within the circle of the zodiac, comes to $\frac{360}{25{,}920}$, since the solar system takes 25,920 years to complete the 360 degrees of its rotation on its own axis. Since $\frac{360}{25{,}920} = \frac{1}{72}$, it takes 72 years of annual precessions to make the "backward" movement of the equinox along the circle of the zodiac reach 1 degree of angle. But, degree by degree, in 30 x 72 years, that is 2,160 years, the precession makes the equinoctial sun pass from one sign of the zodiac *into the preceding one,* and from one Pythagorean Great Month *into the following one.* The "precessional order" is the reverse of the order in which the sun "passes before the signs of the zodiac."

On March 21, 1967, the sun rose nearly at the intersection between Pisces and Aquarius. The Earth continued its revolution around the sun (direction of the arrow in the drawing) and the next day, March 22, the sun rose in Pisces. A month later it passed into Aries, a month after that it passed into Taurus, and so on. On March 20, 1968, the vernal point was one seventy-second of a degree farther into Aquarius. This was such a small amount that by March 21 it was again in Pisces. It will take 72 years before the sun, 1 degree into Aquarius, will still be in Aquarius on March 22. And not until March 21, 4127, will the vernal point be as far

into Capricorn as it was into Aquarius on March 20, 1968.

At this point, readers interested in theory will be rejoined by those for whom practical results are sufficient.

On March 21, 1950, the vernal point passed from Pisces to Aquarius. Let us go back a few thousand years. Between 4530 and 2370 B.C., the equinoctial sun rose in Taurus. As long as the equinox was in Taurus, Pharaoh's priests professed the cult of Apis the bull. When, because of the precession, the equinox entered Aries, Apis was succeeded by the ram god Khnum, in about 2370 B.C.

Then another cult appeared in Egypt: that of Amon, also a ram god, who entered into competition with Khnum. When competition between the two gods became too demagogic, Apis began returning to the scene. It was then that Moses appeared and committed his "chosen people" to a religion in which the symbolism of the ram plays a fundamental part. And when the vernal point had entered Pisces, from the "chosen people" came the "New Covenant," that is, the Christian Church, in whose symbolism the fish is essential.

It is easy to quibble and invoke Pure Chance. For each stage of the Egyptian-Jewish-Christian lineage, considered in isolation, Pure Chance can be presented as an acceptable explanation. But when we take an overall view and consider the symbolism in question from the beginning of historic times down to the present, three things become obvious:

1. The same symbolic language has been spoken for more than six thousand years: first by Pharaoh's

priests, then by Moses, then by the founders of Christianity.

2. At the dawn of historic times, Pharaoh's priests were not animists, but astronomers who based their religion on the cycle of the precession of the equinoxes.

3. The duration of that cycle could not have been determined *by human beings* before the seventeenth century. (All astronomy books affirm this.)

The situation is the same as with the religion of the Mother Goddess (plausible six thousand years before the religion of Apis) and the discovery of agriculture: I have never (perhaps because I do not know you) met a historian of religion who was interested in astronomy, or an astronomer who was well versed in the history of religion.

But a comparative study of astronomy and the history of religion upsets so many commonly accepted ideas that it is legitimate to wonder if I may not be engaging in some intellectual sleight-of-hand.

Fortunately a constant practice among symbolists who claim to have a "heritage from the Celestials" will enable me to clear myself of suspicion. When a symbol is used as a "lock" on a "door" protecting an essential teaching, a second symbol must be added to it as a kind of "safety lock." In this case the "safety" lock is a connected symbol: to the Ram (Aries), properly honored in view of the position occupied by the vernal point, Moses added the Calf, "son" of the Bull (Taurus), which had been passed by the vernal point and was now detested as a superstition that refused to die; and to the Fish (Pisces), properly honored in view of the position occupied by the vernal point, the Church added the Lamb, "son" of Moses's Ram, which the Church accepts, since it considers itself to be in the same lineage as Moses.

Does the Church still attach as much importance as

its founders did to that symbolism inherited from Pharaoh? In any case it made a curious decision in 1967.

In the early days of Christianity, only the rich ate meat every day. If the Church's concern had been to prevent the rich (and the clergy) from ruining their health, it would have ordered, "When fish is available, you will eat it at least one day a week." But if eating fish had a symbolic value, it was logical to stipulate that "fish day" was to be the day before the Sabbath, with no concern for the availability of fish.

In the days when fishermen came into port in sailboats and refrigeration was unknown, obligating all well-off Christians to eat fish on Friday was an economic monstrosity. The economic monstrosity is equally flagrant when the same Church abolishes that obligation at a time when consumption of fish should be encouraged and preservation techniques have done away with the drawbacks of establishing a single "fish day" for all Christians.

In abolishing the obligation, did the Church intend to show that it had remained faithful to an ancient symbolism? Did a symbolist, on the basis of his own personal opinions, persuade the Vatican to "take an option" on the hypothesis of the Byzantine theologians, just in case? I do not know. If the hypothesis I am presenting is disproved, the Church's decision will still be regarded as a step toward modernization; if the hypothesis is confirmed, the Vatican will have "taken an option" on it at an opportune time.

This chapter, which begins with astro*nomical* data and proceeds from there to a symbolism used by astro*logers,* calls for a further remark. I do not practice astrology, so I am not qualified to decide between those who consider it a science and those who consider it a hoax.

If I were an astrologer, I would do my utmost to find out, in as many cases as possible, the date and time of birth of people killed in car accidents. Allowing for accident victims whose time of birth cannot be determined with certainty, it should take no more than three years to gather the fifty thousand cases necessary and sufficient for a serious study and transcribe them into computer language.

I cannot believe that such a simple idea has not occurred to anyone before me. I therefore tend to conclude that astrologers prefer propitious uncertainty to the kind of experimental verification that I try to impose on each facet of my hypothesis of Celestials.

Confucius and Popularization

If we are to believe Confucius, the solution to all problems and the remedy for all ills lies in precise knowledge of the meanings of words. By an escalation of logical deductions, the Confucian teaching even shows that "precisely defining terms" would have been enough to efface the baneful effects of a regicide, embellished by incest and adultery spiced with murder, in the family of the Duke of Wei. For a Confucian, it is better to commit murder and incest than to divert a word from its precise meaning.

In the course of a session for the benefit of the press, at the end of an international convention of biologists and mathematicians held at Versailles in 1967, the mathematician Lichnerowitz admitted to André Labarthe that some of the discussions had been fully comprehensible to only four or five of the fourteen Nobel Prize scientists who were present.

From this I have drawn two conclusions on my own level: first, no layman has to be ashamed of knowing certain things only through popularized accounts of them, since the same is true of outstanding scientists; and second, by making an effort to enlighten journalists on things that were beyond the grasp of outstanding scientists, André Lichnerowitz showed that he felt

they were "popularizable" enough to be made understandable to the average reader of a newspaper.

The essential thing, of course, is to know what is meant by "popularization," which brings us back to the Confucian requirement of precisely defining words.

I apparently failed to meet that requirement in *Les cahiers de cours de Moïse* and *Les dieux nous sont nés,* since several people have told me that those books gave them an interest in "such things" and prompted them to plunge into books of a kind that I find nauseating, the kind in which it is boldly asserted, for example, that the highest American authorities have had conversations with "extraterrestrials" who came in flying saucers, or that (I will quote directly; the author will recognize page 294 of one of his books, published by an honorable French publisher) "the laser is a magic ruby which receives a weak flash of light and emits it millions of times more powerful. This fact has ramifications that are being carefully studied by occultists."

It remains to be determined what I am qualified to "popularize."

I do not participate, on any level, in the work of any scientific research team, so I have no qualifications for engaging in any kind of "scientific popularization."

I do, however, have some knowledge of the Bible, Byzantine theology and contemporary science popularized at my level. What I presume to believe myself qualified to "popularize" is correlations among domains that are usually separated by airtight partitions.

I am not, of course, the first to look for such correlations, but the greatest of those who did it before me wrote in a bygone time, in that "prehistory of science" from which mankind emerged less than fifteen years ago.

As long as going to the moon belonged to the realm of dreams, the possibility that man might "equal the Celestials of the Myth" was only a metaphysic for demented monks or a mediocre subject for novels of anticipation. I was lucky enough not to have formulated my hypothesis for publication until 1963, when it was still necessary, but already sufficient, to avoid all metaphysics in order to have a reasonable chance of finding a concrete coherence in the Biblical text.

In Part One, I hope I was coherent in my presentation of the coherence I think I have found.

In Part Two, I hope I have given you a desire to read some good popularizers of the exact sciences.

Before going into Part Three, I would like to define three terms.

Fictitious science: an intellectual swindle.

Science-fiction novel: a work of imagination which starts from established scientific data and builds a universe dominated by a logic other than that of Einstein's mathematical orthodoxy.

Novel of anticipation: a work of imagination which anticipates tomorrow's science, but avoids all hypotheses of a universe not subject to mathematical orthodoxy and rational logic.

After the interlude of Part Two, we are about to return to the Biblical text, but we will approach it from a different direction. In Part One, where we were dealing with the remote past, it was logical to start with the Biblical story and collate it with modern scientific data. In Part Three we will be dealing with the future, when our descendants will explore the cosmos. Following the same logic, we must rely preferably on scientific data in foreseeing the future, and insofar as scientific data agree with the Biblical text we will have another confirmation of the plausibility of the overall hypothesis.

PART THREE

Someone once asked, "What is a metaphysician?" And a geometer replied, "He is a man who knows nothing."

—Diderot

(*Interprétation de la Nature, No. 3.*)

"In our time, metaphysics is defined as the science of principles, higher and more general than the other sciences, the one from which all knowledge derives its certainty and unity."

That definition is—fortunately—not mine; it is Littré's, and is therefore an accurate reflection of the nineteenth-century rationalism that still presses down with the full weight of its metaphysical certainties on the efforts of free thought. As soon as a principle becomes outdated, the certainties based on it become so many superstitions—and scientific theories quickly become outdated in our time.

I feel much closer (and I hope you do too) to Diderot, for whom metaphysics is a domain in which anyone can say anything, provided he has enough authority to reject any facts that may venture to contradict a princi-

ple. "No heavier-than-air machine will ever fly; flying will have to be left to the angels of the Myth" is the prototype of the metaphysical statements that were popular in the nineteenth century.

In explaining at least part of the hostility aroused by heart transplants, Christiaan Barnard pointed out that the heart is a "mythical organ" traditionally regarded as the seat of the emotions, and that people who claim to be scientists are still victims of that concept.

And it is obvious: if a man's brain has been destroyed but his heart is still beating, it is hard for us to accept the idea that he is as incapable of emotion as a potato. We can, of course, accept it in the comfortable abstract, where it is clear that artificially maintaining the heartbeat of a man with a dead brain is not really keeping him alive, but using a human body to improve on Galvani's experiments with frogs.

But let us leave the abstract realm of metaphysical reasoning and assume that you know the man whose brain is dead and whose heart is being kept "alive" by a machine. To avoid "stacking the deck," however, we will assume that he is not a relative or even a close friend, but that you have certain ties with him, the kind of ties that time establishes between a surgeon and an accident victim whose progress he has been closely following ever since he revived his inert body, or the kind of ties that time has established between you and Charles, the butcher who always gives you the best cuts of meat and tells you how well his son is doing in school. Could you accept it unemotionally if you heard someone in the hospital say, "Turn off the machine; we're going to take out Charles's heart and transplant it in the cardiac patient in room 381?"

We must resign ourselves to it: accepting the idea that Charles is really dead even though his heart is still beating is as hard for us as it was for Galileo's con-

temporaries to accept the idea that God sacrificed His Only Son for the inhabitants of a ball turning around the sun like other planets. Is our attitude superstitious? Of course.

But superstitions are long-lived. In 1966 the vice president of the University of Islamic Studies in Medina, Saudi Arabia, published a treatise against Galileo's theories, referring to the Koran to support his contention that the sun turns around a motionless Earth resting on mountains. I have not read the treatise, but its existence is scarcely debatable: the *Daily Telegraph* reported the controversy between the Egyptian press and the author of the treatise—who is still the vice president of the University of Islamic Studies in Medina.

But where is superstition and where is truth? As far as Galileo's system is concerned, the problem is solved in non-Islamic universities. As far as God is concerned, it is still under discussion. As far as the heart is concerned, the debate is beginning. As far as my hypothesis is concerned. . . .

Whether they are called gods, Elohim or angels, the Celestials of my hypothesis belong to the Myth; people who claim to be scientists are still victims of that concept when I propose to show that transplanting the Celestials into a concrete reality is a rational enterprise.

It is obvious that at least part of the hostility my hypothesis has been arousing since 1963 is explained by the fact that if I am right it means the end of metaphysics as Littré conceived it.

The texts on which I base my hypothesis promise man that he will "renew the acts" of the Celestials. In relation to previous generations, ours has the great advantage of rationally knowing what obstacles must be overcome in order to achieve interstellar travel, and especially of wondering if it is possible to overcome

them. We therefore know what "secret" to look for in the "bow of the covenant" promised by "my" Celestials, who either did not exist or overcame those obstacles in order to reach our planet. If the "bow of the covenant" is on the moon as my hypothesis maintains, the "secret" must include the "unified equation" of the universe, along with an explanation of what the Elohim meant by "Yahweh ineffable for human beings"—that is, the end of all metaphysical speculation.

Does superstition consist in letting oneself be convinced by my hypothesis? Or does it consist in rejecting that hypothesis, in seeing only lunacy in my effort to take the Celestials out of a Myth that many people regard as still being very much alive, and "transplant" them into a strictly rational reality? The most effective way of sweeping away superstition was formulated by Francis Bacon: we should read, he said, not to contradict, refute, believe or accept, but to weigh pros and cons, and to reflect.

Is the "Yahweh" of the Biblical text "God" or the "unified equation?" As long as the concrete reality of the Elohim has not been determined with certainty, discussing this question would be pure and futile metaphysics.

Trying to conceive of man colonizing some other planet in our galaxy, when the very possibility of the interstellar travel that would be involved is still entirely undemonstrated, would be equally futile if such a colonization, corresponding point by point with what today's scientific knowledge enables us to anticipate for tomorrow, were not already described in a text more than three thousand years old.

So it is quite specifically this correlation between the Biblical story and today's rational imagination that we will find in the following chapters. We will see that we

have only to read Genesis as if it means what it says, without distorting or skipping anything, to find a coherence too logically constructed to be attributed to legends that arose from the imagination of Neolithic people.

But being in conformity with the Bible is obviously not enough to give a solid basis to the "anticipation" in the following chapters. Let us make sure, then, before we get into anticipation, that we are not about to fall into some sort of science fiction based on falsified science.

CHAPTER ZERO

It takes abominable arrogance to proclaim that man is the only thinking being in our galaxy, and therefore its spiritual center. Our galaxy (the Milky Way) is a cluster of more than a hundred billion stars, four billion of which are enough like our own to have a planetary system similar to ours.

How many such planetary systems actually exist? How many of them contain planets inhabitable for beings in our image? On how many of them has life appeared? On those where the initial cell was similar to what it was on Earth, how often has natural evolution led to total failure, a dead end or success?

No one in his right mind would claim to have the answers to that cascade of questions. All we can say with any assurance of rationality is that the existence of a considerable number of inhabited planetary systems in our galaxy is a strong statistical probability. (According to a generally accepted estimate, at least a hundred thousand systems have conditions conducive to the development of life in conformity with our norms.)

We can also add that unless we are to consider the "human phenomenon" as a unique case (look out for arrogance!), we must accept the view of biologists who

maintain that under "Earthly" conditions a conformation similar to ours is the most probable for "lodging" an intelligence open to logic and inclined to take an interest in the cosmos. And with regard to those beings physically and intellectually "in our image," whose existence is statistically probable in several thousand planetary systems, we saw in Chapter 3 that no scientist has concluded that it is impossible to travel from one planetary system to another.

There is thus a theoretical non-impossibility for beings whose existence is statistically probable. To go from that to a flat assertion that Celestials have come to Earth would constitute, by definition, either science fiction, which aims to give honest enjoyment to those who enjoy it, or neo-obscurantism, which aims to enrich those who do business in "mysteries" and false ideas.

I therefore make no such assertion. If I could give a *certain* answer, a gold statue of me would already be standing in the Louvre, beside the "Mona Lisa." I have simply shown, with supporting evidence, that:

1. The priests of Antiquity used a symbolism requiring knowledge of the precession of the equinoxes, yet the best astronomers and historians of science say that Neolithic people cannot have discovered that phenomenon, much less determined its duration.

2. As a heavenly body, the moon presents an anomaly for which the Cabalistic tradition (going back to protohistoric times) seems to offer an explanation too rational to have come from the Neolithic imagination, which is considered to have been more inclined toward the supernatural than toward the rational superhuman.

3. The Biblical account of a colonization by the Elohim (which we will follow step by step in the following chapters) corresponds better to the idea of

such a colonization that can be formed by a civilization on the threshold of space travel than to a "divine activity" as it might be imagined by primitives if they had no memory of astronauts in their image.

I therefore use a method modeled on that of Le Verrier, who "theoretically foresaw" the existence of Neptune because it was the most rational explanation for certain anomalies in the behavior of Uranus. The reality of "my" Celestials would provide the most rational explanation for certain anomalies, of which the three listed above are the most flagrant.

It goes without saying that other explanations are possible. Astronomers and historians of science *may* be mistaken: Neolithic people *may* have discovered the precession of the equinoxes all by themselves. The moon *may* have synchronous rotation from natural causes. Chance *may* be enough to explain the correlations between the protohistoric Myth and the data of modern science.

These explanations are more or less tenable if each of the three anomalies is taken individually, even though the reasoning of astronomers and historians of science is rigorous, even though the moon's synchronous rotation is an enigma, and even though the correlations between the Biblical story and today's realities go far beyond the statistical probability of chance. But the three anomalies form a whole—which is logically and rationally explained by the hypothesis of "my" Celestials and can be explained without it only by bringing in the monkey that Emile Borel put to work typing the *Aeneid.*

The first difference between a hypothesis and a certainty is that the hypothesis cannot get along without resorting to imagination.

"The Venusians may have taken the balloon probe

that came from the Soviet Union and put it in one of their scientific museums," Nicolas Kozyrev said in 1965.

Professor Nicolas Kozyrev, a great Soviet specialist on Venus, is the man who directed the prodigious success of Venus 4 in 1967. Does he talk loosely, in the same way as that amiable Dr. Strange who, at the "UFO convention" held in Vienna in 1967, stated that a Venusian had paid a long visit to the Pentagon? Not at all. Kozyrev simply reasons as a Russian, that is, as a man for whom imagination is not something to be avoided like the plague, but an essential ingredient of the scientific spirit: *he dreams.*

Does it really advance rational knowledge of Venus to dream in order to see things through the eyes of Venusians whose existence is highly unlikely? For the majority of Frenchmen, the answer is, "No, that's ridiculous!" For the majority of Russians, the answer is, "Yes." Esnault-Pelterie, the French pioneer in space travel, died in 1955 without having ever been taken seriously; as early as 1903, the Russians were fascinated by Tsiolkovski's ideas.

That primacy of dreams and imagination among the Russians is bewildering to today's Frenchmen, who consider themselves solidly "Cartesian" as soon as they have been able to forget that Descartes said he had "had the revelation" of his method in a "marvelous illumination" coinciding with his entrance into the Rosicrucian Society.

And that difference in the scale of values involves an equally obvious difference in everyday life: the Soviets are barely four times as numerous as the French and their country was still bankrupt from the effects of civil war only forty years ago, but although it is far behind France in automobiles, the Soviet Union is far ahead in areas where, as technology progresses, one must *forge*

those dreams which "sensible" Frenchmen expect progress to *dissipate*.

Every Russian, happy to let himself be swept along by Kozyrev's dream, knows how many material comforts he has had to give up for the space program that scattered medals bearing inscriptions in Cyrillic letters over the surface of the moon, when each ounce of cargo cost a fortune to carry.

I must ask you to read the rest of this book as if I had written it in Russian, then translated it into French (which is, in fact, almost true). Shall we go?

With a stroke of the pen, we have just passed the year 2000. In the 1970's, the dream of astronomers in the sixties became a reality: an observatory was built on the moon, from where the stars can be studied without having to look through the screen of the Earth's atmosphere. Astronomers in the observatory began drawing up a map of the sky showing stars within a radius of fifteen light-years that have planetary systems. The year 2000 was marked by the final development of methods making it possible to determine which systems have planets inhabitable for human beings. And a few years later thirty astronauts set off for one of those planetary systems—taking as great a risk as Columbus when he set off for "India" in 1492.

Is the dream I am proposing wild science-fiction or rational anticipation?

So far I have only given a condensed version of the dream without which the Soviet and American space programs would be nothing but an absurd waste of money.

But what I expect exploration of the moon to reveal is either purely imaginary, if my initial hypothesis of the

reality of the Elohim who came from the sky is not confirmed, or the realization of the future promised by the texts on which I base my hypothesis. (Chapter 7: "Man will renew the acts related at the beginning of Genesis.")

For the time being, we can only ask whether a rational explanation other than the one I am proposing—a historical reality transmitted by the Hebrew text—can be given for the correlation between the rationally conceivable future and the past described by Genesis.

So thirty men are heading for planetary system Aleph, which maps of the sky drawn up in the late twentieth century show to be similar to ours. (If such maps are found on the moon, already drawn up by the Elohim, the expedition will, of course, take place much sooner.)

CHAPTER 1

The idea that human astronauts might find a planetary system exactly identical to ours is so absurd that no science-fiction novel would use it. But I am not writing science fiction here; I am writing an anticipation to see whether, faced with the same problems, human astronauts identifiable with the Celestials of my hypothesis would behave in the same way as Genesis says the Elohim behaved—in other words, to see whether the Celestials of the Biblical text behaved rationally, or whether they were only a band of supernatural gods who arose from the Neolithic imagination.

Create: to draw something out of nothing.
—Littré

To begin with, the men created—by drawing them out of the nothingness of anonymity—the planets of the system they had just reached, particularly the planet that seemed best adapted to human needs, which they named Eretz ("land" in Hebrew).

In the beginning God created heaven and earth. (Genesis 1:1.)

Eretz was apparently deserted and empty. The radar of the spaceship (a "projection of the spirit of man") detected no installation on it that would have indicated the presence of even a rudimentary civilization under the mantle of opaque clouds that kept the surface of the planet in unending darkness. The men landed on the natural satellite of Eretz, which provided a convenient launching platform.

The earth was without form and void, with darkness over the face of the abyss, and the spirit of God hovering over the surface of the waters. (Genesis 1:2.)

It was essential to dissipate the opaque clouds and bring sunlight back to Eretz. But before starting on that, they had to set up a working base on Eretz's moon and provide housing for themselves.

Having pointed out those difficulties, we must assume that they were overcome and that the first phase of the plan was carried out in the allotted time.

God said, "Let there be light," and there was light; and God saw that the light was good, and he separated light from darkness. (Genesis 1:3-4.)

Let me make an aside here. The animistic gods of

today's primitives are distinguished by an omnipotence that makes them supernatural and impossible to identify with mere supermen subject to the constraints of matter, whereas the Elohim (and, to a lesser extent, the Celestials of other protohistoric myths) are essentially of the same nature as man: we see them making mistakes, feeling regret (as in Genesis 6:6, where they are sorry they created man), and constantly behaving like superhumans, always in our image, never supernatural. Can we deduce from this "identity" that when the Biblical text was written (Moses lived in the twelfth century B.C.) the story of the "astronautical" activity of the Elohim was glossed over because, several thousand years after their departure, that activity had become incomprehensible (as it remained until recent years)? That is only a hypothesis, but it is in conformity with logic, historical data and the Myth.

The Bible says nothing about the means employed by the Elohim during the first "days." I might follow its example and skip over the subject, but that would be an evasion of the primary question: Can we *rationally* imagine astronauts dissipating the opaque clouds amassed by a glaciation in a planetary system which is still in the grip of that glaciation, and where everything must be built up from the beginning? I do not claim to describe what really happened; I am simply trying to show that the thing is conceivable without leaving the bounds of rationality—and without contradicting the Biblical text.

Mars was free of clouds during the glaciation, because of its poverty in water and atmosphere. I *imagine* the Celestials installing their departure base there (in underground buildings supplied with air from pressure tanks—why be stingy?). From that base they set up a shuttle service between Mars and the moon.

Did they stabilize the moon very quickly, as I suggested in Chapter 9? Or did they take their time and conserve energy, which they could have done by stimulating and channeling the volcanic activity of the moon in order to expand it? (There are various indications that the moon may be like Swiss cheese below its surface, and because of the conservation of angular momentum the rotation of a heavenly body is slowed when its diameter is increased.) Even though it is giving too much to Pure Chance, we can even imagine that natural forces had already stabilized the moon and provided it with cavities in which an underground installation could conveniently be placed, at the bottom of a crater facing the Earth.

Did the first of the phases, which the Bible calls "days," occupy the Celestials for 2,160 years, as a linear interpretation of the Pythagorean cycle would indicate? That is a convenient simplification which commits us to nothing and is compatible with the duration of the Würm III glaciation and the order of greatness of the tasks involved. The Myth and modern science agree in placing the maximum number for the occupants of a spaceship at about thirty. Be that as it may, at the end of the first phase the clouds around the chosen planet had been dissipated and there was again an alternation of day and night.

> *He called the light day, and the darkness night. So evening came, and morning came, the first day.* (Genesis 1:5.)

At this point a comment is called for: Biblical days begin in the evening and not at dawn, as in other human communities. Hebrew tradition explains this by the fact

that "in the beginning" there was night. To this we can add a suggestion whose logic is drawn from the text: each of the six phases begins with the "darkness" in which the Celestials are groping to determine the program of the next phase in the overall plan, and ends with the "light" of the finished achievement.

There is also a serious objection: What right do we have to say that Genesis tells the story of how a planet was made inhabitable, a rationally justifiable enterprise, rather than describing an irrational creation of the universe from nothing? The Book of Job gives us that right (for Cabalists, the Book of Job is on the same level as Moses's Pentateuch, with which it constitutes the initial "rock"): "Then the Lord answered Job out of the tempest: [...] Where were you when I laid the earth's foundations? [...] when the morning stars sang together and all the sons of God sang aloud?" (Job 38:1 7.)

The stars thus existed before the Earth, according to the Biblical account as well as modern science. And when the first phase had been completed, the sons of the Elohim were there, to acclaim their leader named Yahweh. Without venturing any farther into our dream than Professor Kozyrev does into his, we can imagine the descendants of the first astronauts applauding the success achieved; we can even imagine that the "chorus of stars" was a flood of congratulatory messages from all known inhabited worlds.

But let us leave dreams and come back to reality, to the "night" when the program of the second phase was established.

> *God said, "Let there be a vault between the waters, to separate water from water."* (Genesis 1:6.)

When the opaque clouds (of dust) had been dissipated, the atmosphere must logically have been heavier with moisture than a Turkish bath, if the glaciation had the effect that geologists think it had (evaporation of more than half the water of the oceans); that is, the same effect implicitly indicated by the Biblical text, in which the torrential rains lasted a whole "day."

> *So God made the vault, and separated the water under the vault from the water above it, and so it was; and God called the vault heaven. Evening came, and morning came, a second day.* (Genesis 1:7-8.)

Precipitating all the water in those clouds must logically have turned the surface of the Earth into a marsh, and that is exactly what the text says.

> *God said, "Let the waters under heaven be gathered into one place, so that dry land may appear."* (Genesis 1:9.)

Once again, the program of the phase was formulated "in the evening," and then it was carried out.

> *God called the dry land earth, and the gathering of the waters he called seas; and God saw that it was good.* (Genesis 1:10.)

Here, things went more quickly. Was it because streams and seas tend to find their beds by themselves? Was it because the work was carried out more efficiently? What part did the glaciers play? I know of no text referring to this; the Biblical account goes on to the next part of the program.

> *Then God said, "Let the earth produce fresh growth, let there be on the earth plants bearing seed, fruit-trees bearing fruit each with seed according to its kind."* (Genesis 1:11.)

Did greenery thus reappear as dry land emerged from the marsh? By the end of the third phase had plant life resumed its chlorophyllous function and "recharged" the air with oxygen, that is, set off a return to normal conditions? We will see in the next chapter that this is exactly what the Biblical story indicates. But let us go on reading, without skipping a single word.

> *So it was; the earth yielded fresh growth, plants bearing seed according to their kind and trees bearing fruit each with seed according to its kind; and God saw that it was good. Evening came, and morning came, a third day.* (Genesis 1:12-13.)

At the end of the third phase, oxygen had returned and fruit trees ("native" trees, since they were

"produced by the earth") were bearing fruit. The Celestials (the Elohim of the Biblical text, the men of our anticipation) were able to leave their underground base on Mars and settle on the "chosen planet." It would be logical for the natives of the planet, having been driven into deep caves by the glaciation, to come "out of the ground" as soon as plant life had reappeared, and that is exactly what they do in the second chapter of Genesis. This chapter is a "flashback" on the outstanding events of the first chapter, which is more an outline than a detailed description.

In Chapter 1, all the achievements are attributed to the Elohim, collectively. Yahweh, the leader of the Elohim, is not mentioned by name until Chapter 2, Verse 5. He appears there both as the leader of the Elohim and as the Celestial who is personally in charge of the native bipeds.

Before going on to Chapter 2, let us take time to reflect on the first three phases, as we have dissected them in order to subject them to logical and rational analysis.

The order in which the account is presented has a rigorous logic. That logic in no way resembles the logic that can be discerned in the theogonies of contemporary primitives, nor is it the logic of natural biological evolution. It is, however, precisely the logic of the Earth's return to normal conditions after the perturbation caused by the Würm III glaciation.

The Würm III glaciation occurred in about the twenty-second millennium B.C.; its effects had certainly been dissipated before the tenth millennium B.C., when general conditions were about what they are now. Were they dissipated in the natural course of things? If the hypothesis of "my" Celestials is rejected, that goes without saying, and it is perfectly acceptable to reason.

But seventeen thousand years went by between the twenty-second millennium B.C., when the glaciation took place, and the fifth millennium B.C., when the First Civilizations arose in historic times. And that brings up some questions.

1. Could seventeen thousand years of oral transmission in Paleolithic times have preserved an account of the passage from the glaciation to normal conditions as logical and coherent as the one that appears in the Bible?

It is hard to think so, but there is no other possible explanation if one rejects my hypothesis of Celestials leaving Earth in the eighth millennium B.C. after giving their "teaching" to bastard offspring capable of preserving it in writing, a teaching which Pharaoh's priests were about to lose when Moses rediscovered and reconstituted it.

2. Even if we accept the idea of an unchanging oral transmission over a period of seventeen thousand years, can we explain how a description of Elohim accelerating the return to normal was grafted onto such an incredibly well preserved story *without disrupting its logical order in any way?*

Did Paleolithic people need gods, and did their priests satisfy that need by adding gods to the story? If so, is it conceivable that they grafted gods onto a historical narrative without distorting it? Is it conceivable that they preferred to adapt the gods to the narrative, rather than adapting the narrative to the gods? Is such respect for the historical narrative compatible with taking the liberty of introducing gods into it?

One can conceive and accept anything, including even the cosmology of the vice-president of the Islamic University of Medina, but to accept the idea of a historical narrative that was transmitted unchanged for

seventeen thousand years, yet was embellished with gods, one must really be determined to accept anything rather than the hypothesis of "my" Celestials.

At this point I will set down a corollary dream of Venusians who died under the clouds of the glaciation because the Elohim preferred to colonize Earth, which has a usable satellite, rather than Venus, which does not have one. Is that any more ridiculous than Professor Kozyrev's dream?

And without stating positively that it is true, Professor Shklovskii has put forward the hypothesis that one of the satellites of Mars may be artificial. Its progressive loss of altitude *seems* to go beyond the normal margin of error in observation of it.

CHAPTER 2

The literary device of the flashback is used in the second chapter of Genesis.

> *When the Lord God made earth and heaven, there was neither shrub nor plant growing wild upon the earth, because the Lord God had sent no rain on the earth; nor was there any man to till the ground.* (Genesis 2:5.)

Chapter 2 thus brings us back to the time when the Elohim decided that the Earth was to "produce fresh growth." And what happened on that threshold between the second and third "days?" What logic required.

Let us not lose sight of the fact that natural evolution (from the amoeba to the physical form best suited to perceiving the mathematical orthodoxy of the universe) does not *necessarily* lead to the two-legged mammal, although that form represents a highly plausible direction for evolution to take. In the universe as Einstein conceived it, thinking beings may be mon-

strously ugly or handsome as gods, but they will always have feet liberating the arms from the function of locomotion, hands liberating the mouth from the function of prehension, and a brain that raises the questions we are now raising. (Professor Leroi-Gourhan's books are easy to read, and authoritative.)

But it is obvious that bipeds who had been caught by a glaciation in Paleolithic times, and had survived for several generations by eating lichens in caves, must have been rather wretched specimens from an intellectual standpoint; they were barely "human."

Did the Elohim of the Biblical text (like the men of my anticipation) see the emergence "from the ground" of bipeds in their image but as lacking in a "soul" as animals? That is what the text seems to indicate.

> *Then the Lord God formed a man from the dust of the ground and breathed into his nostrils the breath of life. Thus the man became a living creature.* (Genesis 2:7.)

It is imagination guided by the rails of logic, and not some unbridled fantasy, that enables us to reconstruct the first encounter between Elohim and men in the Biblical text, and between men from the sky and Eretzian bipeds in my anticipation.

"Our remote ancestors were right," say the men from the sky: "when a planet is inhabitable for us, natural evolution has already populated it with creatures in our image."

"The old people told the truth," say the bipeds emerging from the dust of the ground, "when they said that behind the clouds is a giant fire."

Did the native bipeds confidently walk up to the

bipeds who came from the sky, or did the latter have to run after them and catch them? It does not matter; what matters is that the Bible tells of an agreement that led to the native bipeds having a "soul breathed into them."

What kind of "breathing?" What kind of "soul?" Let us avoid the hypotheses of science fiction mingled with metaphysics and read the Biblical text, which is always explicit, logical and rational.

> *Then the Lord God planted a garden in Eden away to the east, and there he put the man whom he had formed.* (Genesis 2:8.)

The Celestials could thus concern themselves with serious matters, leaving the natives to do the gardening and related work. The "soul" is what seems to distinguish the gardener biped from the gorilla biped.

We will now go back to the first chapter, to the beginning of the fourth "day." And we will leave those mysterious "trees" in suspense: the "tree of the knowledge of good and evil" and the "tree of life." The Bible tells us that they stood in a garden of edible plants and fruit trees—as scientific research centers (the one at Saclay, France, for example) are often placed in the middle of a flowering garden.

On the planet as we left it before looking ahead to Chapter 2—that is, with its plant life restored and its Eden installed and placed in the keeping of native bipeds—what should the bipeds from the sky have logically done next? Exactly what the Biblical text (which we interrupted at Genesis 1:13) says they did.

> *God said, "Let there be lights in the vault of heaven to separate day from night, and let them serve as signs both for festivals and for seasons and years."* (Genesis 1:14.)

Are we to read this as meaning that the Elohim drew up maps of the sky for the fourth "day" of their plan? Even though we know that in the Biblical text the stars existed before the Earth, the interpretation I am proposing here *is* an interpretation, and not what I have so far limited myself to giving: a reading analyzed and commented upon in the light of logic and rationally acceptable data.

I have therefore gone to excellent sources to make sure that seeing the "work of the fourth day" as draw-

ing up maps of the sky as seen from the Earth is as compatible with the Hebrew text as it is with the logical sequence of the colonization I am proposing.

Was that "day of astronomy" also the "day of science in general," and particularly of the industrial infrastructure that makes all the difference between a "civilization of light" and the "darkness" of primitivism? The expressly stated purpose of the fourth "day" is to "separate light from darkness" (Genesis 1:18).

Strictly speaking, light and darkness had already been separated, in a way judged to be satisfactory, on the first "day." For the fourth "day," are we to take the expression in the figurative sense I am proposing?

The existence of an industrial infrastructure, of the same order as the one that our own astronauts will build up on any planet they colonize, constantly appears in the Biblical text when it is read without the superstitious interpretations that make the Elohim an imitation of Zeus.

Ezekiel's chariot, as it is described in the Bible, is not some sort of flying carpet; it is a metal vehicle that obviously came from a factory. The "sword whirling and flashing" of the cherubim, who "guard the way to the tree of life" in Genesis 3:24, implies the existence of weapons factories. The "tower" in the eleventh chapter of Genesis, which makes Yehweh fear that the native bipeds may equal the Celestials, shows that for the original Biblical text, in Hebrew, air travel was not done by means of flapping wings, as in the pagan myths with which Christianity is impregnated.

The fourth "day" is thus either the "day of science and technology, including astronomy" or an intrusion of irrationality into a rational narrative.

The most unquestionably rational logic is found in the fifth "day," when animal life reappears in an order

which is not that of evolution but of the restocking of a planet to which normal conditions are being restored after a devastating glaciation: insects are the first to be "reborn," more or less spontaneously (after a hibernation that was more bearable for them than for earthly vertebrates); birds, which feed on insects, are the next to be "reborn"; then come sea animals (whose "genetic stock" is adaptable to hibernation in a frozen state), herbivores, reptiles and, in the last phase, carnivores.

The sixth "day" is therefore not the "day" of the *appearance* of the native biped in the image of the Celestials, as is often imagined as the result of hasty reading aggravated by superstitious beliefs, but the "day" which begins with a perfectly explicit decision.

> *Then God said, "Let us make man in our image and likeness to rule the fish in the sea, the birds of heaven, the cattle, all wild animals on earth, and all reptiles that crawl upon the earth."* (Genesis 1:26.)

This passage shows the impossibility of translating the Hebrew text any better than approximately. "Elohim," here translated as "God," is plural, but the Hebrew verb is in the singular. The beginning of the sentence can be interpreted as either "Then Elohim [plural] said [singular]. . ." or "Then the Elohim [that is, their whole group, considered as a single entity] said [singular]. . . ." Be that as it may, there is no escaping the fact that the text says "in *our* image."

This means that either "Elohim" is the plural I am proposing, and "our" is as coherent as the decision to fashion man in the image of bipeds as concrete as we are, or "Elohim" is the "Immaterial God," in whose

image it would be absurd to fashion man, and "our" is the "plural of majesty" referred to by some commentators. But Cabalists and Hebrew scholars shrug their shoulders when anyone suggests the existence of a "plural of majesty" in Hebrew.

How can that "Immaterial God," who has a plural name in Hebrew but is said to have formed man in *his* image, have been accepted through the centuries by a civilization that is now preparing to colonize other planets, modeling that technological effort on the story of a colonization of our remote ancestors by the Elohim? The answer is quite logical:

For Paul the Apostle to the Gentiles, the problem was to make the pagan barbarians accept the Law of Moses because he considered them indispensable to the "fulfilment of Scripture." In order to be understood by them, he offered them an interpretation of the Bible in which the Word, surpassing their understanding, could be identified with Zeus who, as all barbarians knew, occasionally transformed himself into a man.

This initial paganism, which enabled Paul's Church to make the barbarians accept the Law of Moses, is outdated now that rational minds shaped by Christianity consider the Biblical text as unworthy of their attention as those superstitious interpretations which turn the Elohim in our image into an imitation of Zeus.

The first chapter of Genesis ends with the statement that at the end of the sixth "day" everything was "very good" (at the end of each of the five preceding "days," the Elohim conclude that what they have done is simply "good," without a "very").

So we can now pick up Chapter 2 again at the point where we left it.

We left the second chapter of Genesis when the garden of Eden had been placed in the care of the native biped. Next, Yahweh gives him some precise instructions.

> *He told the man, "You may eat from every tree in the garden, but not from the tree of the knowledge of good and evil; for on the day that you eat from it, you will certainly die."* (Genesis 2:16-18.)

This statement appears to be false when, in the next chapter, the man and the woman eat the "forbidden fruit" and do not die of it. All catechisms give the same explanation. Now that biologists have relegated to the realm of superstition the idea of a human race that was immortal before original sin, they say in effect, we must interpret the passage as referring to *spiritual* death.

What does "spiritual death" mean? And why "nudge" a text which, as we have seen from examining it sentence by sentence, needs only to be

read without "nudging" in order to reveal itself as being in conformity with the future promised to us by the best-qualified scientist of our time? The rigorous method of systematic doubt, from which we have never departed, allows us to state only two things: first, that we do not know the nature of the forbidden "fruit"; and second, that there is a prohibition whose object remains to be identified.

As soon as the prohibition has been formulated, we are brought back to inescapable concrete reality.

> *Then the Lord God said, "It is not good for the man to be alone. I will provide a partner for him." So God formed out of the ground all the wild animals and all the birds of heaven.*(Genesis 2:18-19.)

Chronologically, there can be no doubt: it was *before* the creation of herbivores and birds that "selected samples" of the native bipeds who came "out of the ground" were discovered, given a "soul" and instructed in gardening. Chapter 2 has thus returned us, by means of a flashback, to the very beginning of the fifth "day," when the decision to "create" animals was made.

> *He brought them [animals and birds] to the man to see what he would call them.* (Genesis 2:19.)

This explicitly shows us how the Celestials solved

the problem of language, that is, of communication, between themselves and the natives.

Because it would have been premature earlier, I skipped over the fact that in the first chapter of Genesis the Elohim began by naming "day" and "night" *in their language,* thus bringing about a confusion (which has been perpetuated even in Western languages) between a "period of twenty-four hours" and "the sunlit part of that period." The Elohim then gave *in their language* the words "heaven," "dry land" and "seas." But, as we have seen, the native bipeds "came out of the ground" as soon as these last "celestial words" had been introduced; and we have just seen that it was in the language of the natives that the "creation" was "named."

Is it possible that a text relating only legends born of the imagination of Neolithic people could correspond so exactly (thanks to Pure Chance) to the logical sequence of a colonization as we can rationally conceive it?

Anything is possible. The hypothesis of the concrete reality of the Elohim, as opposed to that of legends born of the Neolithic imagination, is simply more logical and rational.

The second chapter ends with the story of Eve being made from one of Adam's ribs, a story for which there is no shortage of allegorical explanations. But when it is placed in the rational context of what we may surmise about the protohistoric period between 11,000 and 8000 B.C., it seems closer to concrete reality than to allegory.

Before the Würm III glaciation (about 21,000 B.C.), man had an intelligence and a sense of observation, corroborated by ethnology, that were incompatible with ignorance of the cause-and-effect relation between

the sex act and the impregnation of women. After that glaciation, in about 10,000 B.C., the cult of the Mother Goddess seems to indicate that man was ignorant of that relation. Between the two is the glaciation whose consequences, if my reasoning is correct, explain that degeneration of human knowledge. The native biped presented by the Biblical text as "male and female"—that is, no more aware of paternity than other mammals—fits into the regression I am proposing.

In that case, the end of the second chapter is logical and coherent. The "soul" that had been "breathed into" man had made him capable of gardening. On the sixth "day," when restoration of normal conditions to the planet had been achieved, the Elohim began concerning themselves with the biped in their image, to raise him gradually to their level. Yahweh thus brought man to an understanding of the rudiments of obstetrics. Man was astounded to learn that the children borne by the female came out of the male, that it was as if their bones were made from one of his ribs. Amazing!

When he had recovered from the astonishment that Yahweh's revelations had aroused in him, man began reasoning: "So the male isn't only an instrument of pleasure for the Mother Goddess's priestesses! The Mother Goddess is a superstition that Yahweh considers ridiculous. Without the male, the female is sterile. So my wife's son is also *my* son, just as the sons of the Elohim are the sons of a couple. And now that I've understood all this, I have a 'soul.' I'm closer to the Elohim than to the animals."

As we have seen, the flashback in the second chapter of Genesis is situated in the third Biblical "day." In the "schedule" of the precession of the equinoxes, that "day" ends with the passage of the equinoctial sun from Scorpio to Libra; that is, in about 15,330 B.C.

According to ethnologists, what distinguished the sixteenth millennium B.C.? The appearance of the first *mechanism*: the spear thrower.

No matter where we stop in our anticipation modeled on the Biblical text, there are obvious correlations among the Biblical "days," changes of "eras" marked by the equinoctial sun, and the data of ethnology.

In conformity with the Biblical text, the sixteenth millennium B.C., marked by the "soul" that was "breathed into" man, marks the first "innovation explosion" (which paved the way for that of the ninth millennium B.C., corresponding to the seventh "day"). It was a stage that man marked by the introduction of a new word. "Now that I know I came not from a miracle of the Mother Goddess, but from a man," he said, "I will call my female a *woman,* and the male will attach himself to her so that *their* children will be born of the union of their flesh. Hosanna!"

Proud to know that he was now comparable to the Elohim, man was nevertheless aware of the chasm that separated him from them. Since they had liberated him from the idolatry of the Mother Goddess, he worshiped them as gods—and he worshiped Yahweh as the god of the gods.

I am entirely convinced, but I am too Cartesian to reject the possibility of some error, some flaw in my reasoning. I am too accustomed to the practice of methodical doubt not to tell myself that I may have erected a plausible and convincing system on an error, just as Ptolemy erected his system, plausible and convincing enough to be accepted for two thousand years, on the false idea that the sun turns around the Earth.

I am entirely convinced and I am *really* waiting impatiently for exploration of the moon to give my hypothesis unquestionable experimental confirmation.

I am entirely convinced but, being neither a visionary nor a charlatan, I ask you again, now that you are nearing the end of this book, to let me know any mistakes and flaws you may find in it (and it surely contains some). I therefore urge you to read and reread the first two chapters of Genesis as carefully as you can.

The rigorous correlation between our foreseeable future and the past related by Genesis is evidence in favor of my hypothesis as important as knowledge of the precession of the equinoxes by Pharaoh's priests and the extreme improbability that the moon's synchronous rotation is natural.

CHAPTER 3

The third chapter of Genesis is the one in which Eve is "tempted" by the speaking serpent who knows as well as the other sons of the Elohim the effect of the "fruit" that confers the forbidden "knowledge of good and evil." I had envisaged an "explanation" for that chapter, but it was only a pure hypothesis with no conceivable possibility of experimental verification in the foreseeable future. And so, on the advice of scientists in my circle of friends, I decided not to include the hypothesis in this book, since ill-intentioned readers might use it as a pretext for saying that the whole book is nothing but pure speculation and obscurantist science fiction.

To those interested in the matter, I will only point out that Satan, the "fallen angel," is presented as one of the "sons of the Elohim" in the Book of Job: "The day came when the members of the court of heaven took their places in the presence of the Lord, and Satan was there among them." (Job 1:6.)

For Cabalists, the Book of Job is as important as the Five Books of Moses, and it is forbidden to translate these six books; they should be read only by those who understand Hebrew.

Is the Book of Job, forty-two chapters long, an

"aside" in the narrative of Genesis, and does it clarify the third chapter as the "aside" in the second chapter clarifies the work of the last three "days" in the narrative? Since I have no proof of this to offer, I can only suggest it to the reader who, having followed me this far, has consented to see a historically grounded narrative in the Biblical text.

Even so, it is worth emphasizing that in the third chapter the Hebrew text leaves no possibility of evasion, so that all translators of the Bible are obliged to write (without explanation) that the serpent says to Eve, ". . . you will be like gods, knowing both good and evil." (Genesis 3:5.)

And all translators of the Bible show Yahweh confirming this: "The man has become like one of us." (Genesis 3:22.)

If I have not totally failed, you no longer need anyone's help to read the rest of the story of an aborted colonization in the Biblical text, from Chapter 4 of Genesis, where Yahweh becomes angry and regrets having created man, to Chapter 6, where "the sons of the gods" have intercourse with "the daughters of men"; and then in Chapter 8, where the Elohim decide to leave Earth; Chapter 9, where they promise Noah (fathered by one of the Elohim) a "bow set in the cloud" as a sign of a "covenant"; and Chapter 11, where men prematurely try to reach that "bow" by building the tower of Babel.

Where did the Elohim go after leaving Earth? I have no idea, of course, but if the "bow set in the cloud" is really on the moon, we will probably know before long.

After Chapter 11 begins the difficult reconstitution of the "heritage of the Celestials," first by the lineage of Pharaoh, then by that of Abraham, then by that of the Gentiles, which is grafted onto Abraham.

It was the symbolism of a single Tradition that gave the pschent to the Pharaoh of Apis, the double pschent to the Pharaoh of Amon and the triple tiara to the pope of Pisces. If that Tradition is not an obscurantist delusion, trying to make a launching tower "with its top in

the heavens'' is no longer premature now that the equinoctial sun has entered Aquarius, which has been regarded as announcing the ''Golden Age'' as far back as the time of the Babylonian priests.

If the ''bow of the covenant'' is waiting for us on it, the moon will be the ''Heavenly Jerusalem'' spoken of by prophecies which admit they do not know what it is.

Next year on the moon, the Heavenly Jerusalem. . . .

THE MOON: Outpost of the Gods

Is it possible that extraterrestrials arrived in our solar system between 22,000 and 21,000 B.C. and set up an Earth-observation post on the moon? That they soon built a spaceport for purposes of reaching and colonizing Earth?

Were they "the sons of the gods" mentioned in Genesis—the Elohim who had intercourse with "the daughters of men?" If so, why did they abandon their fathering efforts and return to the moon—and was the Tower of Babel constructed by their few descendants as a launching pad to rejoin them?

Here, in his latest and most extraordinary quest for the truth, Jean Sendy not only dares to answer these challenging questions but gives startling evidence of an ancient message awaiting our own moon-explorers—almost surely to be discovered in our own lifetimes.